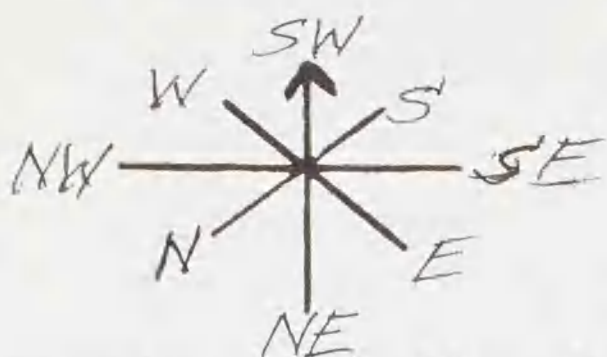


DATE 2 Nov 1964  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
1015	-----	-----	-----	-----	entrance of Pearl Harbor	
1017	Ruddy Turnstone	20			gravel bars at entrance	
1033	Pomarine Jaeger	1			light phase	
1033	"	1			light phase	
1034	"	1			light phase	
1034	"	1				
1041	"	1			dark phase	
1053	Noddy Tern	2	SE	low		
1104	Wedge-tailed Shearwater	1	N	low		
1111	Pomarine Jaeger	1	SW		light phase	
1122	Wedge-tailed Shearwater	3	SW	low		
1137	Pomarine Jaeger	1	E	low	light phase	
1141	Wedge-tailed Shearwater	1	SE	low		
1145	Noddy sp.	2	NW	low		
1145	Shearwater	1	NW	low		
1150	Brown Booby	1	E	low	IMMATURE	
1155	Pomarine Jaeger	1	over water		light phase	
1155	Terns	2	E	low		
1201	Pomarine Jaeger	1	SE	ca 50'	light phase	
1208	"	1	SW	ca 25'	" " (not same as above)	
1209	Shearwater - Petrel	1	SE	low	light below	
1211	wedge-tail shearwater	1	NE	"		
1211	"	1	SE	"		
1227	"	2	N	"		
1253	"	1	N	"	Dark phase	
1303	Pomarine Jaeger	1				
1325	"	1		75'	following ship	
1335	Wedge-tailed Shearwater	1	E	low	" " - adult with black cap, light underparts.	
1337	"	1	E	low		
	Pomarine Jaeger	4			} flushed from water - all in one flock all light phase	
1344	Wedge-tailed Shearwater	1	E	low		
1359	Cook's/Bonin Is. Petrel	1	N	low		
1412	Dark-Rumped Petrel	1	NE	low	? 8/4	

Wedge-tails  
light phase  
unless otherwise noted  
P/G





DATE 2 Nov 1964  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1430	---	---	---	---	the 4 jaegers still following and feeding in the garbage dumped by the ship	
1431	Wedge-tail Shearwater	1	N	low		
1445	" "	1	SE	low		
1448	" "	1	NE	"		
1521	" "	1	↗	"		
1531	large Pterodroma	1	N	"		
1513	" "	1	NE	"		
1529	wedge-tail shearwater	1	NE	"		
1536	Flock Sooty tern	1			not actively feeding, but milling around. (1 dark phase wedge-tail)	
	wedge tail shearwater	200 ± 25				
1545	Flock Common Noddy Tern	5+			not actively feeding, but milling around	
	Wedge-tail Shearwater	25 ± 5				
1604	Wedge-tail Shearwater	1	SE			
1610	" "	1	SE		dark phase	
1610	" "	6	S			
1611	Small Pterodroma	1	↗			
1620	Wedge-tailed Shearwater	1	N			
F 1645	Flock Wedge-tailed Shearwater	80+	N		Flock 1 bird <sup>(shearwater)</sup> seen to feed but rest of 1 dark phase Wedge-tail birds appeared to be migrating	
	Small Pterodroma	1	N			
F 1703	Flock Wedge-tailed Shearwater	75+	↻		probably feeding; large fish (skipjack?) observed; at least 1 dark phase Wedge-tail	
	Sooty Tern	5				
	Pomarine Jaeger	2				
F 1720	Wedge-tailed Shearwater	1	N	low	alighting in water, dabbling around; avising after extended feeding stabs	
1732	WEDGETAILED SHEARWATER	1	N	low		
1746	Wedge-tailed Shearwater	1	N	low		
1750	PTERODROMA	1	NW	low		
1757	Wedge-tailed Shearwater	1	E	low		
1800	---	---	---	---	apparent sunset	
1812	Small Pterodroma	1	NE	low		





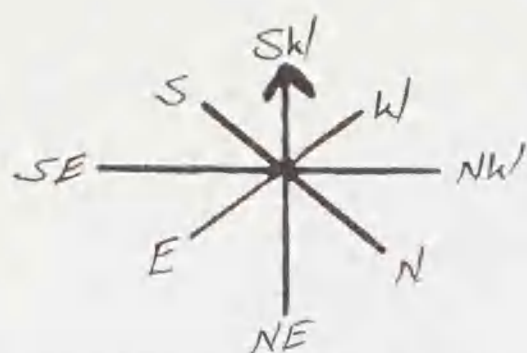
DATE 3 Nov 1964

Pg. # 1

commenced: 0637

	time	species	#	dir.	hgt.	remarks	loc.
	0651	Cook's Petrel	1	E	low	Circling but not fishing	
	0656	Large Pterodroma	2	NW	low	Probably at least 1 was Juan Fernandez Petrel	
	0657	- - -	-	-	-	Apparent Sunrise {same 0645}	
	0723	Cook's Petrel	1				
	0724	" "	1	NW	low		
		Juan Fernandez Petrel	3	NW	low		
F	0730	Sooty Terns	7	S	low	feeding	
F		Cook-Bonin Pet.	4	"	"	"	
F		Wedge-tailed Shearwater	1	"	"	"	
F		Pterodroma	1	"	"	"	
F		Frigate Bird	1	"	"	" small, Cook's Petrel size, but head & neck appeared all white. Underwing <del>with</del> similar to Cook's but white area is gray with little contrast between dark & gray areas.	
F		Juan Fernandez	3	"	"	"	
F	0745	" "	1	N	low		
F	0749	Sooty Tern	90	E	medium-low	Feeding	
		Juan Fernandez	7	E	low	"	
		Dark-rumped Pet.	1	E	low	"	
		Wedge-tailed Shearwater	2	E	low	"	
	0820	Greater Frigate	1	E	med-high		
	0823	Wedge-tail Shearwater	1	E	low		
	0831	Large Pterodroma	1	NW	low		
	0850	Large Pterodroma	1	S	low		
CA 0900	0853	Cook's Petrel	2	S	low	SHIP STOPPED	
	0916	Pterodroma	1	NW	low		
	0925	Red-footed Booby	1	CA	to 75'	immature	
	0935	Small Pterodroma	1	S	low		
	0936	White-tailed Tropicbird	1	S	300' ca		
	0940	Shearwater/petrel	1	NW	low		
	0941	Cook's Petrel	1	N	low		
	0950	Wedge-tailed Shearwater	1	S	low		
	0952	Cook's Petrel	1	S	to 50'		
	1008	" "	2	NW	To 50'		
	1015	" "	1	SW	to 30'		
	1025	" "	1	S	to 30'		
	1036	Tropicbird or Fairy Tern	1	SW	to 50'	in distance	
	1036	WEDGETAILED SHEARWATER	1	S	Low		
	1042	" " "	1	SE	"		

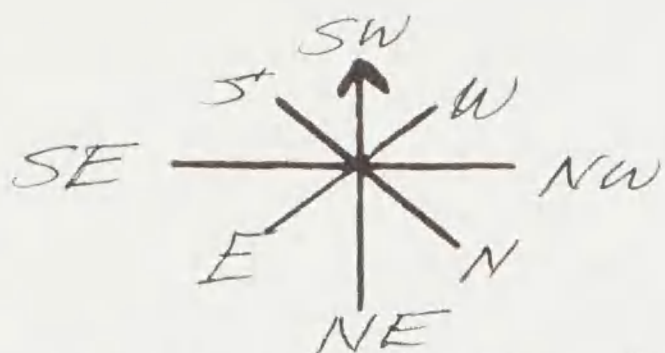




DATE 3 November, 1964  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1105	---	---	---	---	UNDERWAY.	
1109	Wedge-tail shearwater	1	N	low		
1148	Sooty or Greyback Tern	2	NE	low		
1158	Pterodroma	1	NNW	low to 50'		
1201	Flock	---	---	---	not actively feeding, looks as if flock is breaking up. The two terns at 1148 were probably leaving this flock - Some of the terns were calling.	
	Sooty tern	29	+			
	wedge-tail shearwater	5	+			
1212	Cook's Petrel	1	} SE			
	Wedge-tail Shearwater	1				
1213	Wedge-tail Shearwater	1	SE			
1240	Cook's Petrel	1	SE	low		
1247	" "	1	NW	low		
1252	Sooty Tern	2	SE	to 30'		
1258	Dark-rumped ? Petrel	1	NW	to 50'		
1345	Petrel	1	SE	low	Bulwer's Petrel or <del>the</del> Storm Petrel	
FF 1401	Feeding Flock					
	Great Frigatebird	2	C1			
	Sooty Tern	50+			at least 1.5 miles AWAY	
<del>1418</del>	<del>Cook's Petrel</del>					
1419	Cook's Petrel	1	W	low		
FF 1430	Feeding Flock					
	Juan Fernandez Petrel	2	C1	low		
	Cook's Petrel	6				
	Kermadec Petrel	1			observed catching a flying fish out of the air	
	Great Frigatebird	14				
	Wedge-tailed Shearwater	3				
	Sooty Tern	5				
FF 1435	Feeding Flock					
	Sooty Tern	8	C1	low		
	Wedge-tailed Shearwater	7				
	<del>Cook's Petrel</del>					
	small Pterodroma	5				
	large Pterodroma	5				
1439	White-tailed Tropicbird	1			dove into water from <sup>about</sup> 100 feet	





DATE 3 November 1964  
Pg. # 3

time species # dir. hgt. remarks loc.

1440 Juan Fernandez Petrel 1 N low

1443 Wedge-tailed Shearwater 3 NW low

1447 " " 1 ENE "

1450 Pterodroma 1 SE "

1454 Sooty tern 4 SW "

1454 Sooty(?) Tern 2 ☉ "

1455 Pterodroma 1 SE "

1457 Shearwater/Petrel 3 S to 50' arching up & flying like Sooty Shearwaters but too far out to tell

1520 Pterodroma 31 SE low

1523 " 1 " "

1530 Frigate bird 1 ☉ To 50' Immature

1600 Flock — feeding but very scattered as if getting ready to disperse.

Sooty Tern 30 ±5

Wedge-tail Shearwater 3 +

Juan Fernandez Petrel 1

Pterodroma 10 +

Cook's ~~Petrel~~ Petrel 1

Bonin Island Petrel 1

Shearwater/Petrel 5 ±1

} together for good contrast

1608 Sooty Tern 2 } SE

Small Pterodroma 1

1619 Cook's PETREL 1 SE Low

1629 JUAN FERNANDEZ PETREL 1 SE Low

1631 GREAT FRIGATE BIRDS 2 ☉ 150'

1729 Japanese White-eye 2 NE 85' one attempted to land on TV antenna on flying bridge, but changed its mind & flew on.

1747 Cook's/Bonin Island Petrel 1 SE low

1752 Sooty ? Shearwater 1 SE low

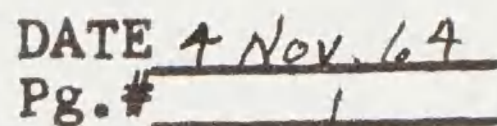
1759 " 1 SE low

1800 Cook's/Bonin Is. Petrel 1 SE low

Wedge-tailed Shearwater 1 SE low

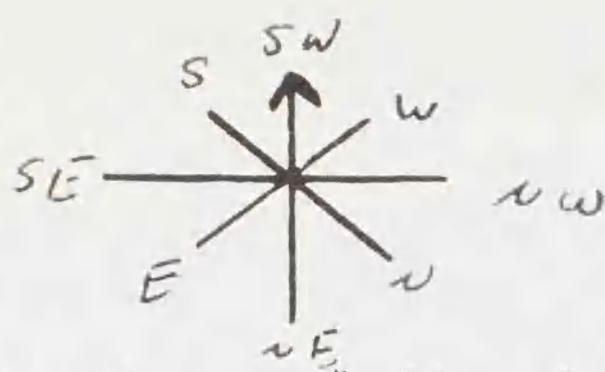
1815 ————— Apparent Sunset





time	species	#	dir.	hgt.	remarks	loc.
0654	SMALL Pterodroma	1	E	Low		
0656					SUNRISE	
0658	COOK'S/BONIN PETREL	1	S	Low		
0721	Wedge-tailed Shearwater	1	S	low		
0725	COOK'S/BONIN Petrel	1	N	low		
	" " "	1	N	low		
0726	" " "	1	N	low		
0737	" " "	1	NW	low		
0741	JUAN FERNANDEZ Petrel	1	NW	low		
0752	large Pterodroma	1	S	low		
0755	COOK'S/BONIN Petrel	1	NW	low		
0755	" " "	1	SE	low		
0759	" " "	1	SE	low		
0801	" " "	1	SW	low		
0804	Wedge-tailed Shearwater	1	SE	low		
0809	COOK'S/BONIN Petrel	1	W	low		
0811	" " "	1	SE	low		
0815	COOK'S/BONIN Petrel	1	NW	low		
0827	Pterodroma	1	NW	low		
0828	Sooty Shearwater	9	S	to 50'		
0905	Pterodroma	1	S			
0910	Sooty Shearwater	16+	S			
0910	Shearwater/ Petrel	1	S			
0925	" "	1	SW			
0925	Sooty Shearwater	60	± S			

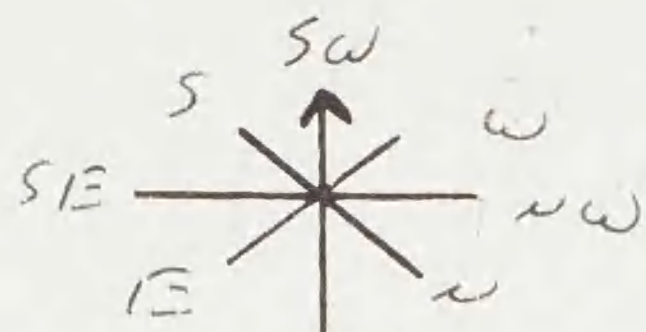




DATE 4 November, 1964  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
0929	Wedge-tail Shearwater	1	E	low		
0955	Pterodroma	1	N	"		
0955	"	2	SW	"		
1005	"	3	N	"	— flying as if heading for a feeding flock	
1007	Juan Fernandez Petrel	1	NW	"	" " " " " " " "	
1007	Large Pterodroma	2	NW	"	" " " " " " " "	
1017	Sooty(?) Shearwater	45	S	"		
1027	Cook's/Bonin Petrel	1	NW	"		
1038	Juan Fernandez Petrel	1	NW	"		
1040	Cook's/Bonin Petrel	1	SE	"		
1042	Large Pterodroma	2	NW	"		
1100	Cook's Petrel	6	E	"		
	Herald Petrel	1	E	"	— near size of Juan Fernandez Petrel, however smaller, dark <sup>brown</sup> underwing, white below with narrow dusky breast band, throat white, <sup>dark</sup> brownish above, darker area about eye.	
	Great Frigatebird (2♂ + 1 imm)	3	E	"	Phoenix Island Petrel P/G	
1139	Great Frigatebird	1	NE	100'		
1157	Cook's/Bonin Petrel	1	SW	low		
1202	Pterodroma	1	NW	low		
1210	Cook's/Bonin Is. Petrel	1	S	low		
1228	Cook's/Bonin Petrel	1	SW	low		
1400	Flock	—	—	—	Feeding	
	Sooty Shearwater	16				
	Shearwater/Petrel	1			white belly.	
					after 8 minutes they began flying (arching up) and headed South as a group	





DATE 4 November, 1964  
Pg. # 3

time species # dir. hgt. remarks loc.

1425 Sooty Shearwater 60 ± 5 — — avoiding ship

1438 Small Pterodroma 2 SW low

1445 Sooty Shearwater 80 ± 10 SW low to 50' appear to be feeding.

1452 Sooty Shearwater 25 ± 5 S low

1452 Greater Frigatebird 1 E 40'

1457 Shearwater/Petrel 1 NW low

1510 Great Frigatebird 1 NE 50'

1529 Sooty Shearwater 35 ± 5 S low

1555 " " 4 S low

1555 Wedge-tailed Shearwater 1 NE low

1604 Blue-faced Booby (imm) 1 S 20'

1622 Sooty Shearwater 30 S low

1623 " " 20 S low

1659 Wedge-tailed Shearwater 1 NW low

1710 Sooty Shearwater (?) 1 S low Lone bird; came fairly close to ship; one observer saw silver underwing flashes; two observers saw none.

1721 Small Pterodroma 1 W low

1723 Large Pterodroma 1 W low

1725 Cook/Bonin Petrel 1 SW low

1731 Sooty Shearwater 75 ± 10 S 50'-low Non-feeding flock; moving swiftly

1735 " " 1 S low

1738 Shearwater/Petrel 1 SW low Wandering back & forth in front of ship

Sooty Shearwater 30 ± 10 SW low

1740 Sooty Shearwater 1 S low

1740 " 4 S low

1740 " 2 S low

1740 " 1 S low

1744 " 1 S low

1744 Cook/Bonin Petrel 1 SW low

1758 Lg. Pterodroma 1 O Low

1804 Sooty Shearwater 35 ± 5 S Low

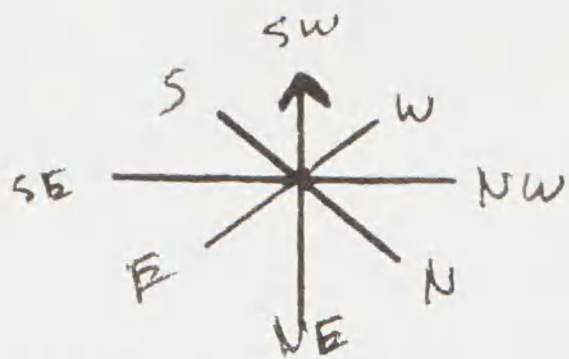
400  
150  
250

311  
259

364  
150

175  
1020





DATE 4 Nov 1964  
Pg. # 4

time species # dir. hgt. remarks loc.

1804	Wedge-tailed Shearwater	1	NW	low		
1809	Sooty Shearwaters	2	S	low		
1810	Sooty Shearwaters	35	S	low	Non-feeding flock moving rapidly	
1813	Wedge-tailed Shearwater	1	SE	low		
1814	Sooty Shearwater	80±5	S	low-50'	Non-feeding flock; strung out over considerable distance in narrow lines.	
1818	Sooty Shearwater(?)	2	S	low		
1819	Sooty Shearwaters	4	S	low		
1823	"	100 ±10	S	low	Non-feeding flock; strung out in narrow lines	
1826	"	17	S	low	Flock	
1829	"	45±5	S	low	Flock	
1833	"	4	S	low		
1834	"	1	S	low		
1837	Sooty Shearwater?	1	S	low	Dark; heavier body + wing beat Pale foot? P/H	
1838	Sooty Shearwater	3	S	low		
1835	—	—	—	—	Apparent sunset	

37  
50  
104  
70  
—  
291



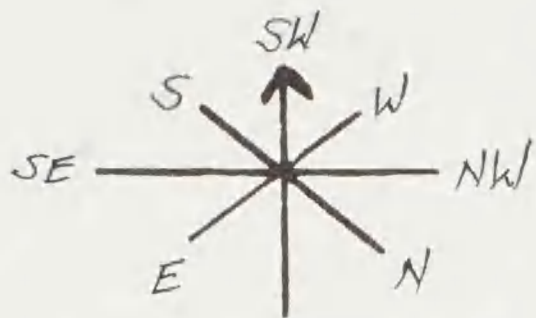


DATE 05 Nov 1964  
Pg. # 1

0644

time	species	#	dir.	hgt.	remarks	loc.
0715	Sooty(?) Shearwater	10+	S	scatting		
0716	Sooty Shearwater	2	S	"	Apparent sunrise	
0720	"	1	S	"		
0721	"	1	S	"		
0728	" "	2	S	"		
0733	Sooty(?) Shearwater	4	S	"		
0736	Wedge-tailed Shearwater	1	NW	low		
0848	Cook's Petrel	1	SSE			
0852	Shearwater/Petrel	1	N			
0852	Sooty Shearwater	20	ES S	scatting		
0857	Large Pterodroma	2	N	low		
0842	Cook's Petrel	2	NW	low		
0901	Cook's/Bonin Petrel	1	NW	low		
0903	Cook's/Bonin Petrel	1	NW	low		
0909	Cook's Petrel	1	SE	low		
0917	Cook's Petrel	3	NW	low		
0924	Cook's/Bonin Petrel	1	NW	low		
0936	Small Pterodroma	1	NW	low		
0938	Cook's/Bonin Petrel	1	SE	low		
0948	Cook's Petrel	2	SE	low		
0952	Cook's/Bonin Petrel	2	N	low		
0955	Cook's Petrel	1	NW	low		
0959	Wedge-tailed Shearwater	1	N	low		
1003	Cook's/Bonin Petrel	2	S	low		
1010	Cook's/Bonin Petrel	1	SW	low		
1010	" " "	1	SW	low		
1010	" " "	1	SW	low		
1023	" " "	1	N	low		
1028	Cook's Petrel	1	S	low		
1032	Cook's/Bonin PETREL	1	NW	low		
1036	Cook's PETREL	1	NW	low		



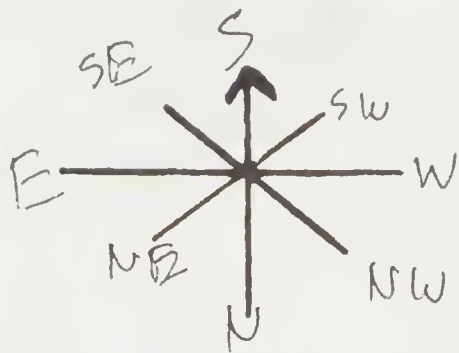


DATE 5 Nov 64  
Pg. # 2

time species <sup>NE</sup> # dir. hgt. remarks loc.

1036	WEDGETAILED SHEARWATER	1	NW	low		
1039	Cook's/BONIN PETREL	1	NW	low		
1041	" "	2	SE	"		
1045	Cook's Petrel	1	NW	"		
1045	Cook's/BONIN PETREL	1	NW	"		
1046	Cook's PETREL	1	N	"		
1130	WEDGETAILED SHEARWATER	1	SE	"		
1150	Sooty Shearwater	1	S	"		
1151	Pterodroma	1	S	"		
1302	Wedge-Tailed Shearwater	1	NE	"		
1304	Shearwater/Petrel	1	NW	"		
1315	Greater Frigatebird <del>imm</del> (imm)	1	E	40'	feeding	
1321	Leach's Storm Petrel	1	S	low	on Harcourt's	
1358	Sooty Shearwater	2	S	low		
1417	Juan Fernandez Petrel	1	N	low		
1433	Red-footed Booby	7	E	low	2 adults (1 appeared <del>as</del> <sup>with</sup> specks on mid-back), 5 immatures in 3 different stages of plumage (3 predominantly brown with <sup>large</sup> breast bands; 1 mostly dull white below, brown-grey above, with no breast band; 1 in between the previous two descriptions)	-possibly a subadult
1459	Sooty Shearwater	35 ± 10	S	scaling		
1502	Cook's-Bonin Petrel	1	SE	low		
1503	Tropicbird	1	S	150'	probably White-tailed	PHOTOGRAPHED
1538	WEDGETAILED SHEARWATER	1	SE	LOW		
1544	Wedge-tailed Shearwater	1	NW	low		
1615	-----	-----	-----	-----	Johnston Island	turned South
1632	Wedge-tailed Shearwater	4	E	low		





DATE 5 Nov 1964  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1654	Sooty Shearwater	2	SE	Sealing	Close flock	
1702	Wedge-tailed Shearwater	1	W	low		
1720	Pterodroma	1	2	"		
1723	Sooty Shearwater	4	- -	- -	avoiding ship	
1730	Flock				feeding	
	great Frigatebird	3				
	Pterodroma	1			Very far out	
	Shearwater/Petrel	10+				
	Booby	1				
1845	- - -	- - -	- - -	- - -	SUNSET!	

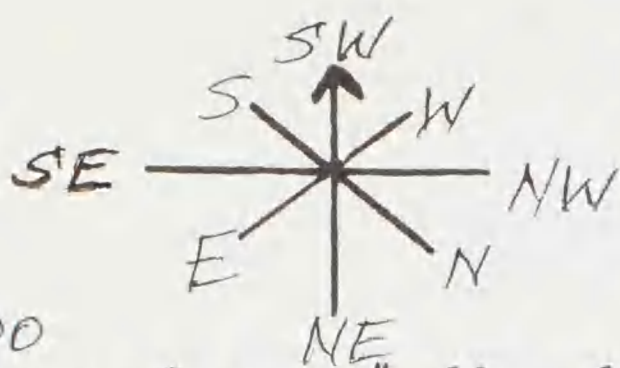


<u>S-P</u>	<u>SS</u>	<u>WT</u>	<u>OP</u>	<u>FO</u>	<u>SP</u>	<u>JFP</u>	<u>RFO</u>	<u>JH</u>	<u>AMS</u>
10	2	2	2	4	1	1	7	1	1
4	3	4	2	<u>4</u>	<u>1</u>	<u>1</u>	<u>7</u>	<u>1</u>	<u>1</u>
3	20	2	4	4	1	1	7	1	1
2	1	1	3						
5	2	<u>1</u>	2						
6	25	4	1						
4	7		<u>14</u>						
3	<u>4</u>								
2	14								
11									
<u>160</u>									

1  
 74  
 50  
 18  
16  
 157

98  
 50  
148





DATE 6 November 1964  
Pg. # 1

0700

time species # dir. hgt. remarks loc.

0715					SUNRISE	
0727	Shearwater/petrel	1	N	low		
0827	Lg. Pterodroma	2	N	low		
0841	Wedge-tailed Shearwater	1	⊙	low		
0847	Cook's Petrel	1	SW	low		
0848	Cook's/Bonin Petrel	1	N	low		
0920	TROPICBIRD	1	—	—	— SITTING IN WATER — DISTANT	
0941	Pterodroma	2	NE	low		
0944	Sooty Shearwater	5	SW			
0946	WEDGETAILED SHEARWATER	2	⊙			
0946	Lg. Pterodroma	1	N			
0946	Sml. "	1	SSW			
0952	SOOTY (?) SHEARWATER	1	SSW			
0956	GREATER FRIGATEBIRD	2	⊙	100'	— Feeding	
<del>1000</del>	JUAN FERNANDEZ PETREL	1	⊙	low		
	SHEARWATER/PETREL	2	⊙	"		
1025	Red-tail Tropicbird	1	SSW	on water	then flew in front of ship & sat down again	
1030	White-neck Petrel	1	NNE	low		
1050	Cook's/Bonin Petrel	1	WNW	"		
1143	" "	2	W	"		
1156	Large Pterodroma	1	NW	"	suggested a dark-rumped Petrel but much too far away	
1158	wedge-tailed Shearwater	1	SW	"		
1204	Sooty (?) Shearwater	1	S	"	hove bird; didn't see linings	
1308	Blue-faced Booby	1	SW	to 100'	observed feeding (dove into water)	
1329	Cook's/Bonin PETREL	3	NE	low		
1329	JUAN FERNANDEZ PETREL	1	UU	low		
1338	Great Frigatebird	2	NE	200' ca.		
1343	" "	2	NE	400' ca.		
1350	Cook's/Bonin Petrel	1	W	low		
1404	Red-tailed Tropicbird	1	E	to 300'	flushed from water	

probably all part of a flock in last stages of breaking up. Pfg.





DATE 6 November 1964  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1442	JUAN FERNANDEZ Petrel	1	W	low		
	Great Frigatebird	1	CA	200' ca.		
1510	Shearwater/ Petrel	1	SE			
1525	" "	1	SE			
1721	JUAN FERNANDEZ Petrel	1	SE	low		
1725	COOK'S/BONIN Petrel	1	SE	low		
1823	Shearwater/petrel	1	SW	low		
1825	Shearwater/petrel	1	SW	low		
1855	-----	-----	-----	-----	apparent sunset	



3-P	net	LP	Traps	SS	FB	2FB	KFF	WAP
3	3	1	1	5	2	1	1	1
3	1	1		1	4	1	1	1
3	4				1	1	2	
2					7	1		
4						4		
4								
3								
3								
<hr/>								
20								

RRP  
2  
1

30  
21  

---

51

8 hrs  
11 3/4 hrs  
11 1/2  
11 1/2

Sooty 1  
Wedge  
Sooty  
Pomarine  
Cook  
Wilm/JF  
H. Warbler  
Dark-rumped  
R7T3  
iUT9  
Pig  
RFB  
Mast B  
Jap WE  
Turnstone  
Jaeger





DATE 7 November  
Pg. # 1


time species # dir. hgt. remarks loc.


0645 - - - - - begin observation

0715 - - - - - apparent sunrise

0724 Cook's/BONIN  
PETREL 1 WNW Low


0730 - - - - - stop for plankton samples

0744 WEGETAILED  
SHEARWATER 1  Low

0745 PTERODROMA 2  "

0750 " 1 NW "

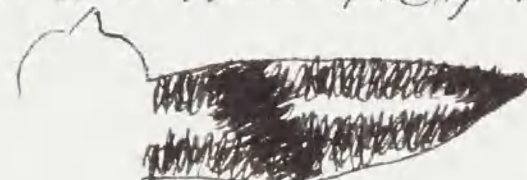
0750 " 1 S "

0835 Cook's PETREL 1  "

0835 PTERODROMA 1 N "

- CROSSED PATH OF ABOVE Cook's & was 1/2 again as large. All BROWN Above with NO distinguishing Marks in upper wing. UNDER-WING heavy ~~thin~~ <sup>DARK</sup> borders with VERY thin white line in center. Black 'dash' Mark COMPLETELY CROSSING UNDERWING & wide. Neck, breast, belly & under tail white.

0840 - - - - - UNDERWAY



0941 Juan Fernandez Pet. 1 SE Low

0943 Sm. Pterodroma 1 NE Low

0945 Wedge-tailed  
Shearwater 1 S "

0948 Shearwater/Petrel 1 NW "

0958 " / " 1 SE "

1000 Cook's Petrel 1 W "

1008 Juan Fernandez  
Petrel 1 N "

flushed from water

1017 Wedge-tailed  
Shearwater 1 W "

Dark phase

1017 Cook's Petrel 1 SW "

1025 Cook's/Bonin  
Island Petrel 1 E "

1027 Juan Fernandez  
Petrel 1 SE "

1033 Lrg. Pterodroma 2 S "

1045 sooty (?)  
Shearwater 1 SE "

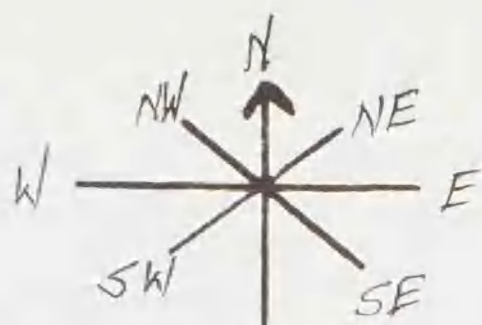
1046 Juan Fernandez  
Petrel 1 SE "

1053 Lrg. Pterodroma 1 N "

1103 Juan Fernandez  
Petrel 1 SW "

flushed from water





DATE 7 Nov. 64  
Pg. # 2

time species <sup>S</sup> # dir. hgt. remarks loc.

1106 SOOTY SHEARWATER 5 S —

1125 SHEARWATER/PETREL 3 S —

Possibly A Wedgetail in Group

1204 Cook's/Bonin Petrel 1 S low

1311 Cook's/Bonin 1 S low

Turned N.E.

1435 Shearwater/Petrel 1 SW low

possibly a sooty shearwater ; wind blown

1438 " 1 SW low

possibly a Pterodroma ; wind blown

1454 Kermadec Petrel 1 W low

light phase

1510 Shearwater/petrel 1 W low

wind blown

1552 small Pterodroma 1 S low

1557 Juan Fernandez Petrel 1 S low

1635 Cook's/Bonin Is. Petrel 1 NW low

1708 JUAN FERNANDEZ PETREL 2 NE "

1712 " " " 3 " "

1712 COOK'S PETREL 2 " "

1712 COOK'S/BONIN PETREL 1 " "

feeding type flight but not seen to do so.  
All grouped together after few minutes.

1715 RED-TAILED TROPICBIRD 1 NE low

- Arose from Water.

1720 JUAN FERNANDEZ PETREL 1 " "

ABOVE BIRDS PROBABLE REMNANTS OF Flock.

1720 Cook's/BONIN 1 " "

1720 WEDGETAILED SHEARWATER 2 NE "

1730 WEDGETAILED SHEARWATER 12

→ ALL BIRDS 1708 — 1740 HRS. APPARENTLY

JUAN FERNANDEZ PETREL 3

PART OF ONE FORMER Feeding Flock WHICH IS NOW FAIRLY WELL SCATTERED.

Cook's PETREL 1

Cook's/BONIN PETREL 10+

1740 Cook's/BONIN PETREL 1 NW low

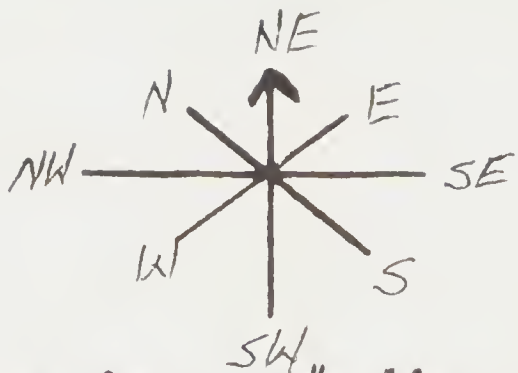
1754 WEDGETAILED SHEARWATER 2 " "

1754 SHEARWATER/PETREL 2 " "

1758 JUAN FERNANDEZ (P) PETREL 1 " "

1800 Cook's/BONIN PETREL 1 SW "





DATE 7 NOV 64  
Pg. # 3

time	species	#	dir.	hgt.	remarks	loc.
1803	WHITE-NECK PETREL	1	SW	LOW		
<del>1804</del>	WHITE-NECK(?) PETREL	1	SW	"		
1814	SHEARWATER / PETREL	1	SE	"		
1817	Lg. Pterodroma	1	SE	"	- DISTANT	
1818	Cook's PETREL	1	NW	"		
1819	JUAN FERNANDEZ PETREL	1	CA	"		
1823	Cook's/BONIN PETREL	1	CA	"		
1828	Cook's/BONIN PETREL	1	NW	"		
1832	CHRISTMAS Is. SHEARWATER	1	SE	LOW		
1835	---	---	---	---	- SCHOOL OF Fish (small Tuna-like) jumping NEAR PORT Bow.	
1838	PTERODROMA	1	NW	LOW	- DISTANT.	
CA. 1851	---	---	---	---	SUNSET!	



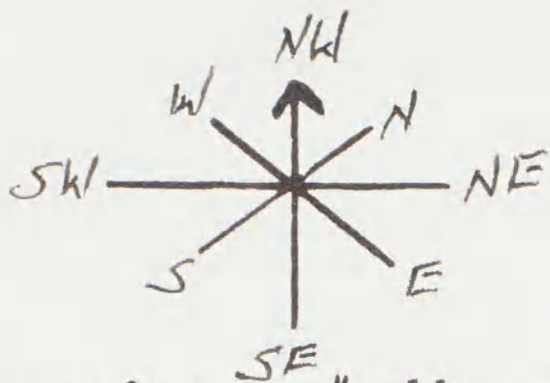


DATE 08 Nov 64  
Pg. # 1

time species # dir. hgt. remarks loc.

0725	-	-	-	-	Apparent sunrise, about	
0737	Cook/Bonin Petrel	2	E	low		
0741	-	-	-	-	Turned approximately SE and stopped	
0744	Red-footed Booby	1	W	med-low	Fishing leisurely off port side; an adult	
0745	Wedge-tailed Shearwater	1	0	low		
0750	-	-	-	-	Has turned about S.	
0756	Leach's/Harcourt's storm petrel	1	NE	low	Black; small; some white on rump, couldn't see whether tail forked or straight; paying no attention to ship	
0806	-	-	-	-	Turned S.E.	
0811	-	-	-	-	Moving SE slowly	
0817	Red-tailed Tropic bird	1	S	med-high	No apparent fishing activity	
0820	-	-	-	-	Turned E.	
0822	Pterodroma	1	W	low		
0824	-	-	-	-	Full ahead N.E.	
0825	Shearwater/Petrel	1	W	low		
0846	Lrg. Pterodroma	1	SE	low		
0907	Shearwater/Petrel	1	SE	"		
0907	Red-tail Tropicbird	2	S	300'		
0955	Sooty Shearwater	19	S	low		
1015	Pterodroma	1	W	W		
1034	Wedge-tail Shearwater	2	-	-	- moving in front of Bow	
1232	Masked Booby	1	N	med-low	Immature; no "fishing" activity noted.	
1250	Cook's/Bonin PETREL	1	S	low		
1400	Bird	10	-	low	- reported by watch sound like Sooty Shearwater	
1435	Shearwater/Petrel	1	NW	low		
1450	Pterodroma	1	SSE	"		
1536	Lg. Pterodroma	1	SE	"		
1537	Sml. "	1	SE	"		
1540	-	-	-	-	COURSE CHANGE TO NW	
1558	Cook's/Bonin Is. Petrel	1	SE	low		
1604	CHRISTMAS Is. SHEARWATER	1	SW	low	-	
1615	Sooty Shearwater	11	S	low		
1650	Juan Fernandez Petrel	1	SE	low		





DATE 8 Nov 64  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1658	WEDGETAILED SHEARWATER	1	SE	Low		
1743	Small Petrel	1	S	low	Flow directly into sun; appeared black + small, but sun maybe affected color visulation	
1750	Harcourts Leach's Petrel (?)		NE	low	Rather far out; a small, dark Oceanodroma; several times, thought I caught a white rump flash - not positive	
1831	Pterodroma	1	E	low		
1832	Wedge-tailed Shearwater	1	SE	low		
1834	"	2	SE	low		
1836	"	1	SE	low		
1846	---	---	---	---	Apparent sunset	

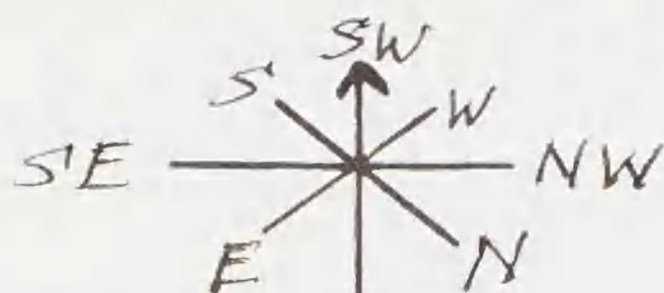




DATE 9 November, 1964  
Pg. # 1

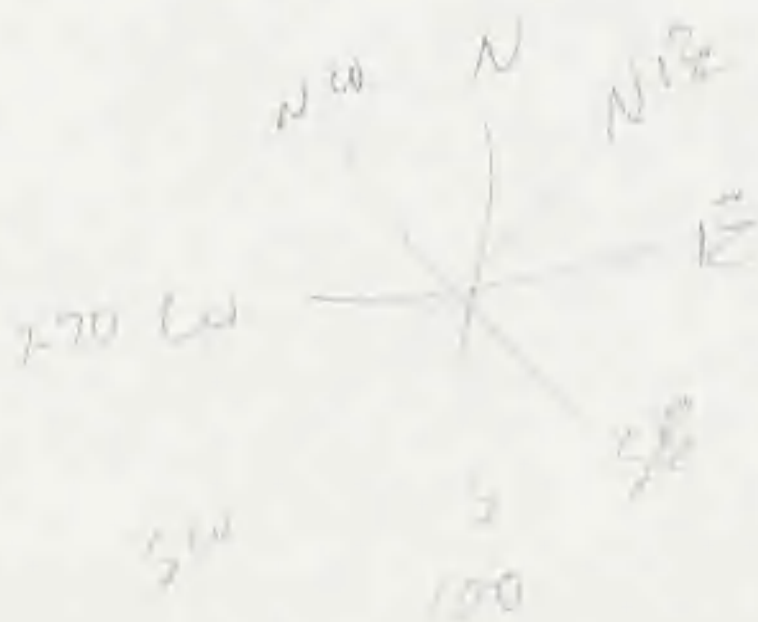
time	species	#	dir.	hgt.	remarks	loc.
					<i>began observations 07:00</i>	
					<i>Sumine ca. <del>07:25</del> 0728</i>	
0757	Sooty Shearwater	4	SE			
0758	Wedge-tail Shearwater	1	E			
0815	Pterodroma	1	SE	low		
0817	Red-Tailed Tropicbird	1	<del>NE</del> NE	100'	short retrice	
0912	Shearwater/Petrel	1	⊙	low		
0915	Lrg. Pterodroma	1	SW	low		
0934	Wedge-tailed Shearwater	2	S	low	One of them photographed.	
1002	Pterodroma	1	N	low		
1006	Wedge-tailed Shearwater	1	NE	low		
1022	Juan Fernandez Petrel	1	N	low		
1034	Wedge-tailed Shearwater	2	N	low		
1046	Juan Fernandez Petrel	1	⊙	low		
1126	Pterodroma	5	N	low		
1245	Shearwater	1	S	low	all dark,	
1322	Cook's Petrel	1	SW	low		
1335	Juan Fernandez Petrel	1	SW	low		
1427	Red-Tailed Tropicbird (adult)	1	SW	60'	flushed from water — no retrices	
1453	sooty shearwater	3	S	low		
1511	Shearwater/petrel	1	W	low		
FF 1533	Wedge-tailed Shearwater	4	⊙ →		Feeding Flock partially photographed	
	Large Pterodroma	5			At least 1 definite Juan Fernandez Petrel	
	Small Pterodroma	5			apparently all dark shearwater	
	Shearwater/petrel	1			50±25 closely packed school of flying fish leaping en mass out of water	
	SFP	1			Pterodroma appeared right over school of flying fish	
					school appeared to be headed in NNE direction	





DATE 9 November 1964  
Pg. # 2

time	species	#	dir.	hgt.	remarks	loc.
1600	Shearwater/petrel	1	E	low		
1608	<sup>small</sup> Pterodroma	1	N	low		
	Shearwater	1	N	low	All dark probably (no light color observed)	
1624	Wedge-tailed Shearwater	3	S	low		
1626	Shearwater/petrel	1	SW	low		
1628	Wedge-tailed(?) Shearwater	1	SW	low		
FF 1634	Great Frigatebird	2	⊙	150' ca.	Feeding Flock photographed	
	Wedge-tailed Shearwater	30		low	flock deployed in long rectangular formation; at first moved parallel	
	Juan Fernandez Petrel	2		low	with ship, then left moving at right	
	Large Pterodroma	20		low	got up off water angle to ship	
					No fish observed	
1640	Juan Fernandez Petrel	2	S	low	} moving toward feeding flock	
	White-necked? Petrel	1	S	low		
1703	---	---	---	---	Turned WNW	
1717	Wedge-tailed Shearwater	20	N	low	} flock	
	Pterodroma	2	N	low		
1742	Cook's/Bonin Is. Petrel	1	W	low		
1839	Christmas Island (?) Shearwater	1	NW	11		







DATE 10 November 1964  
Pg. # 1

time species # dir. hgt. remarks loc.

0719	Wedge-tailed Shearwater	1	NE	low		
0728	Wedge-tailed Shearwater	4	⊙	low	3 of them were cruising back and forth over large area west of ship 100-250 yards out during plankton drop.	
0729	-----	-----	-----	-----	apparent sunrise	no apparent specific interest in fishing.
0730	-----	-----	-----	-----	ship stopped for plankton drop	no dropping to water seen.
0746	Juan Fernandez Petrel	1	SW	low		several of birds also ranged on SE side of ship.
0746	Small Pterodroma	1	S	low		
0815	-----	-----	-----	-----	resumed progress NE	
0822	Wedge-tailed Shearwater	1	NE	low		
0824	small Pterodroma	1	N	low		
0832	Christmas Island Shearwater	1	S	low		
0848	shearwater/petrel	1	N	low		
0855	Sooty Shearwater	12	S	scaling		
0902	Sooty Shearwater	18	S	scaling and low		
0907	Wedge-tailed Shearwater	1	⊙	low		
0917	Shearwater?	1	SE	low		
0922	Sooty Shearwater	1	SE	low		
	Shearwater	1	SE	low		
0926	Pterodroma	1	N	low		
0937	Sooty Shearwater	2	SE	scaling		
0950	Large Pterodroma	1	SSE	low		
1014	White-necked Petrel	1	NE	low		
1020	Cook's Petrel	1	NW	low		
1031	White-tailed Tropicbird	1	NE	fly		
1101	Wedge-tailed Shearwater	1	SE	low		
1102	Sooty Shearwater	22	S	scaling	definitely changed course to avoid flying close to ship	
1107	" "	10	S	scaling		
1110	Christmas Island Shearwater	1	S	low	flushed from water	





DATE 10 NOV 64  
Pg. # 2

time species <sup>SW</sup> # dir. hgt. remarks loc.

1133 GREAT FRIGATEBIRD 1 E 100'

1140 WEDGETAILED SHEARWATER 2 S Low

1233 SOOTY SHEARWATER 4 S "

1305 Red-tailed Tropicbird 1 — — ON water did not flush

1333 Sooty Shearwater 14 S scaling

1337 Kermadec Petrel 1 W low

1337 Sooty Shearwater 1 SW scaling

*Dark brown above, mostly dark below; underwing mostly dark brown, with light brown to dull white flash seen in primary area; also a thin light brown color separation between forward & rear parts of secondary wing*

1511 Sooty Shearwater 1 S " in rain squall

1513 " 2 S " " " "

1537 " 1 S " " " "

1547 Wedge-tailed Shearwater 1 NW low " " "

1603 " 1 W low " " "

1632 Sooty Shearwater 2 S scaling " " "

1652 " 5 S " " " "

1653 Red-footed Booby 1 SW low " " " (sub-adult)

Wedge-tailed Shearwater 1 SW low " " "

1743 Frigate Greater 2 NE High

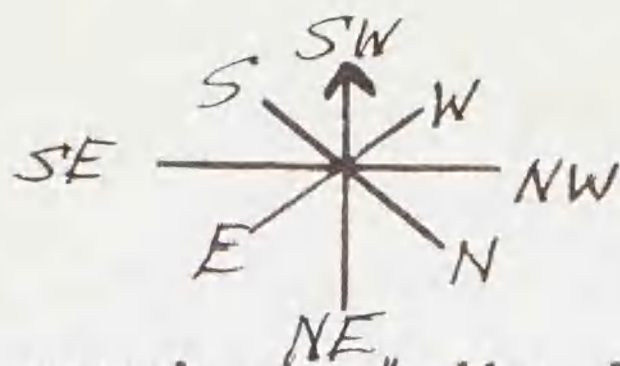
1835 WEDGETAILED SHEARWATER 1 SW Low

1835 RED-FOOTED BOOBY 1 SW LOW imm - (1st yr. Plumage)

1942 — — — — Apparent sunset

2340 1140 Tern 1 — — calling





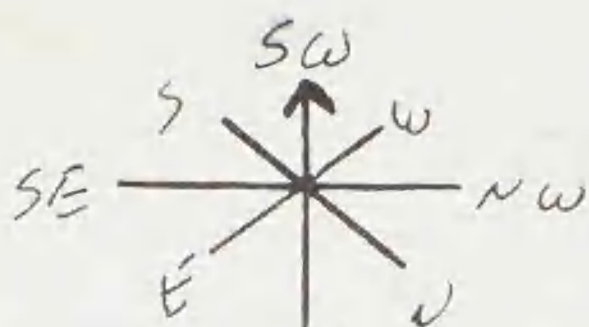
DATE 11 November, 1964  
Pg. # 1

time species # dir. hgt. remarks loc.

0735	---	---	---	---	began watch after sunrise	
0736	Wedge-tail Shearwater	1	S	low		
0737	Red-tail Tropicbird	1	E	600'		
0755	Blue-faced Booby	1	⊙	100-200'	circled over ship during plankton detail/	
0801					subadult collected by Gould	subadult
0814	Wedge-tailed Shearwater	4	⊙	low		
0829	Great Frigatebird	1	NE	200' ca.	subadult ♂	seen capturing flying fish in front of ship
0846	Wedge-tailed Shearwater	4	S	low		
0854	Shearwater/petrel	1	S	low		
0856	Wedge-tailed Shearwater	2	SW	low		
0902	Leach's/Harcourt's Storm Petrel	1	S	low		
0937	RED-TAILED TROPICBIRD	1	E	---	ROSE FROM WATER	
0942	Sm. PTERODROMA	2	E	LOW		
0945	WEDGETAILED SHEARWATER	1	⊙	"		
1010	Wedge-tailed Shearwater	2	NE	"		
1042	"	1	S	"		
1047	Shearwater/Petrel	1	S	"		
1053	wedge-tailed Shearwater	1	S	"		
1102	"	1	S	"		
1107	"	1	NE	"		
1108	"	1	W	"		
1110	"	1	N	"		
1112	"	3	S	"		
1114	"	1	⊙SW	"		
1152	"	1	S	"		
1238	Cook's/Bonin Petrel	1	N	"		
1247	Red-footed Booby	1	⊙	to 1000'		

possibly break-up of feeding flock  
arose from water



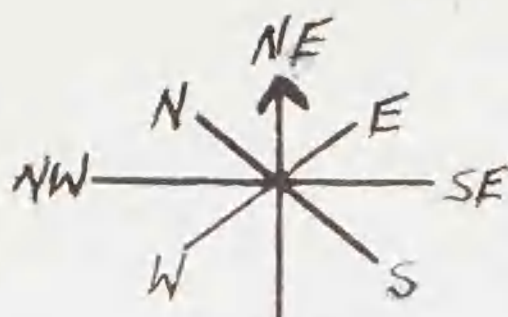


DATE // November 1964  
Pg. # 2

time species # dir. hgt. remarks loc.

1304	White-tail Tropicbird	1	N	250-500 ft.	circled a few times then left.	
1527	Sooty Terns	4	N	med (100')	3 adults, 1 immature; photographed as silhouettes	
1528	Wedge-tail Shearwater	1	N	low		
1532	Sooty Shearwater (?)	2	S	scaling	No underwing wing linings seen.	
1540	Shearwater/Petrel	1	S	low	Storm to S+SW of ship; grey, leaden seas; reduced visibility	
1543	Cook's/Bonin Is. Petrel	1	W	low		
1557	Masked Booby	1	SE	100'±	Immature; followed ship for 20 minutes, swung by port side then south; photographed in two individual scenes	
1618	Wedge-tailed Shearwater	1	SW	low		
1629	White-tailed Tropicbird	1	NE	150'	Photographed	
1642	Red-tailed Tropicbird	1	SE	100'±		
1710	Wedge-tailed Shearwater	1	NE	low		
1714	Wedge-tailed Shearwater	1	SE	low		
1716	Wedge-tailed Shearwater	1	SE	low		
1736	Wedge-tailed Shearwater	2	NW	low		
1810	Wedge-tailed Shearwater	3	SE	low	Not Actively Feeding Flock but circling as if deep school of fish present 25±5 Wedge-tailed Shearwater 1 Cook's Petrel 1 Cook's/Bonin Petrel Around submerged Japanese fishing net	
	Shearwater/Petrel	X	SE	low		
1813	Wedge-tailed Shearwater	X	SE	low		
1814	Wedge-tailed Shearwater	X	SE	low		
1834	Shearwater/Petrel	1	S	low		
1837	Wedge-tailed Shearwater	1	S	low		
1844	Great Frigatebird	1	SE	500'±	immature appears to be moving ahead of main squall	
1850					apparent sunset	

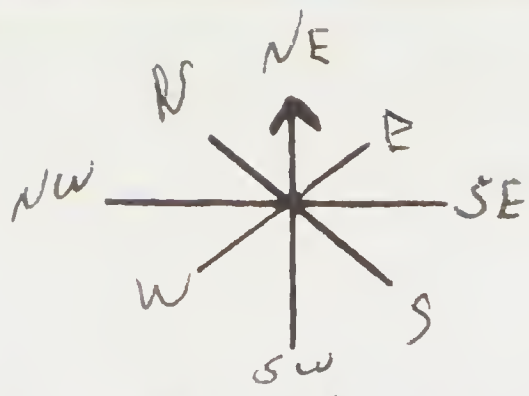




DATE 12 Nov 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0735	---	---	---	---	COMMENCE OBSERVATIONS - NONAPPARENT VISABILITY 500 yd.	---
0745	---	---	---	---	STOP FOR PLANKTON samples	---
0825	---	---	---	---	UNDERWAY - (visability) now 2 mi.)	---
0837	WEDGETAILED SHEARWATER	1	N	LOW	- APPEARED TO HAVE DARK UNDERWINGS. REST OF CHARACTERS LIKE WEDGETAIL. (POOR LIGHT CONDITIONS BUT OBSERVED WELL.	---
0902	SOOTY (?) SHEARWATER	1	S	LOW	- AT edge of RAIN SQUALL	---
0923	Bonin/Cook's Petrel	3	NW	low		---
0924	Wedge-tail Shearwater	1	W	low		---
0951	Greater Frigate	1	⊙	high		---
1008	Sooty Shearwater	2	SE	scaling	Birds cut across bow; definitely turned to avoid ship.	---
1017	Shearwater Petrel	1	SW	low		---
1035	Wedge-tailed Shearwater	2	S	low		---
1038	"	3	S	low		---
1042	"	1	NE	low		---
1053	Sooty(?) Shearwater	1	S	scaling	light No underwing linings; bird all dark; close to ship	---
1105	Cook's/Bonin Petrel	1	SE	low		---
1124	Wedge-tail Shearwater	1	NE	"		---
1214	"	1	SE	"		---
1223	Sooty (?) Shearwater	1	S	"		---
1233	Wedge-tailed Shearwater	1	E	"		---
1244	<del>Pterodroma</del> Pterodroma	1	S	"	white below, dark above, mottled with white across the neck, whitish rump, upper tail <del>very</del> very light gray, but also <del>mottled</del> mottled with dark color. dark of back extending down <del>onto breast</del> <del>above of the wings</del> underwing white with broad black border.	---
1253	Wedge-tailed Shearwater	1	SE	low		---
1253	Cook's/Bonin Petrel	1	S	low		---





DATE 12 Nov 64  
Pg. # 2

	time	species	#	dir.	hgt.	remarks	loc.
	1306	Wedge-tailed Shearwater	1	S	low		
	1329	"	1	S	low		
	1403	"	1	N	low		
	1425	"	1	S	low		
	1427	"	1	S	low		
	1447	"	1	S	low		
	1450	"	1	NE	"		
GA	1500	-	-	-	-	COURSE CHANGE TO EAST	
	1605	"	1	ESE	"		
	1617	"	1	SE	"		
	<del>1715</del>						
	1715	SHEARWATER PETREL	1	NW	"		
	1748	SOOTY (?) SHEARWATER	2	S	"	- Quite Distant & dark birds. Lost from view into Trough.	
	1802	WEDGE-TAILED SHEARWATER	1	ON	"		
	1847	Juan Fernandez Petrel	1	SW	"		
	1855					Apparent Sunset	







DATE 13 Nov 64  
Pg. # 1

time species # dir. hgt. remarks loc.

0727

Apparent Sunrise

0914

SHEARWATER  
PETREL

1

SE

LOW  
LOW

0956

JUAN FERNANDEZ  
PETREL

1

N

"

1023

Great Frigatebird

1

SE

300' ca.

Female

1129

Pterodroma

1

SE

low

1148

Sooty(?) Shearwater

1

SW

scaling

1231

Great Frigatebird

1

E

30-40'

ad ♂

1438

Pterodroma

1

NE

low

1504

Pale-footed  
Shearwater

1

S

low

Very large all dark plumaged shearwater (approximately  $\frac{1}{4}$  to  $\frac{1}{3}$  again as large as Wedge-tailed Shearwater) bill light colored feet not observed (probably hidden by plumage) flight sluggish with no scaling or arcing observed observed in excellent light for about two minutes as bird crossed bow (less than 50 yards in front of ship)

1507

Cook's Petrel

1

S

low

1521

" "

1

S

"

1730

Passed SS

1742

Log. Pterodroma

1

SE

"

1801

Greater Frigate

2

S

high

1802

Wedge-tailed  
Shearwater

1

W

low

1803

"

1

N

low

1822

"

2

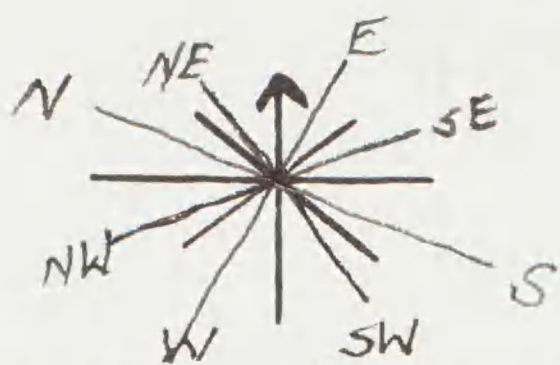
SW

low

1845

Apparent sunset





DATE 14 Nov 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0713	---	---	---	---	APPARENT SUNRISE	
0823	Wedge-tailed Shearwater	1	⊙	low		
0956	Great Frigatebird	1	N	50'	ad ♀	
1157	Wedge-tailed Shearwater	3	ENE	low	} as flock following with ship. Christmas Island only slightly smaller & with stiffer wingbeat — holds wings more <del>rigid</del> rigid & with more of an arc.	
	Christmas Island Shearwater	1				
1205	Wedge-tailed Shearwater	1	ENE	low	} joined flock flying parallel with ship	
	Red-footed Booby	1	ENE	low		
					Flock present until about 1240	
1551	Shearwater/Petrel	1	E	low		
1554	Cook's/Bonin Petrel	2	SW	low		
1706	GREAT FRIGATE BIRD	2	NE	100'	- 1 ♂, 1 ♀	
1750	PTERODROMA	1	SSE	Low		
1830	---	---	---	---	APPARENT SUNSET	



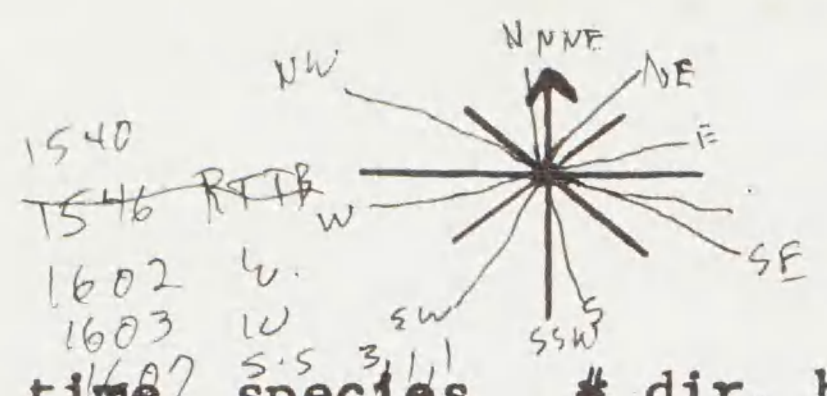


DATE 15 Nov 64  
Pg. # 1

time	species	#	dir.	hgt.	remarks	loc.
0700	—	—	—	—	Probable sunrise	
0732	sooty(?) shearwater	1	S	scaling		
0742	"	2	S	scaling		
0814	Shearwater/Petrel	1	SE	low		
0844	Shearwater/Petrel	1	N	low		
0852	Sooty Shearwater	1	S	"		
0859	White-tail Tropicbird	1	—	—	feeding	
1011	Shearwater/Petrel	1	SE	low		
1054	Sooty Shearwater	20	S	low scaling	one individual appear larger than the rest. Photographed one of flock.	
1059	"	1	S	low		
1105	Sooty Shearwater	1	S	low		
1105	Wedge-tailed Shearwater	2	NE	"	Sooty Shearwater shot <sup>1300</sup> <del>1250-1255</del> from Whale Boat	
1136	"	1	NE	low		
1340	Shearwater/Petrel	1	E	low		
1344	Cook's Petrel	1	SE	low		
1355	White-tailed Tropicbird	2	⊙	high		
1405	Red-tailed Tropicbird	1	⊙	high	Photographed	
1420	Bird	1	W	low	Seen from bridge; in sun for SI watchers	
1435	Sooty Shearwater	1	ENE	low	flushed from water	
1437	Great Frigatebird (ad. ♂)	1	G	400'	Photographed	
1443	Wedge-tailed Shearwater	1	NE	rose	from water; harassed from above by Frigate	
1443	Sooty Shearwater	1	NE	"	" " "	
1451	Sooty (?) Shearwater	1	SE	low		
1459	Sooty Shearwater	1	S	below		
1515	Red-tailed Tropicbird	1	—	sitting	on water entire time as ship passed; appeared to have some food in mouth + throat.	
1519	Christmas Is. Shearwater	1	S	low		



DATE 15 Nov 1964  
Pg. # 2



time	species	#	dir.	hgt.	remarks	loc.
1531	Shearwater sp. Type I	2	SE	low	Basically dark - see #1 on rear; well photographed	
1531	Christmas Is Shearwater	1	NW	low		
1540	Shearwater sp. Type II	2	E	low	See #2; photographed	
<del>1540</del>	<del>Christmas</del>					
1602	wedge-tail Shearwater	1	NE	low		
1603	"	1	W	low	Photographed	
1607	Sooty Shearwater	5	S	scaling + low		
1609	Kermadec Petrel	1	NE	low	light phase; flew parallel to ship for while Barely photographed (quite distant)	
1643	Sooty Shearwater	1	S	scaling		
1648	sooty ? Shearwater	1	S	low		
1650	KERMADEC?	1	⊙			
1653	Shearwater / Petrel	1	NE	low		
1658	wedge-tail Shearwater	1	⊙	low		
1702	Shearwater sp. Type II	1			Photographed	
1715	Shearwater	1				
1720	Sooty Shearwater	1	S	low		
1724	<del>Shearwater</del> Shearwater	1	NE	low		
1800	wedge-tail Shearwater	1	NE	low		
1822	-	-	-	-	Apparent sunset	



#1

Basically dark; primaries quite black; white at base of primary feathers. brown black on underwing, with darker brown-black on edge of underwing; light brown on underside; light brown to med brown on central back; ~~feet~~ <sup>at body</sup> appeared pale colored. No arching. Rather <sup>slow</sup> flight. Not quite sluggish, but <sup>much</sup> slower + heavier than Sooty Shearwater. Underside, <sup>of body</sup> tended toward grey-brown in good light. A Christmas Island Shearwater had come minutes earlier + I came by as close to ship as these 2 (50-60 yds); ~~the~~ in comparison, ~~that~~ <sup>the</sup> alt Xmas was much darker with no lite-brown underparts + no white in upper wing. Approximately size of Xmas or larger.

#2 Bird perhaps smaller than Wedge-tail; size opinions varied; I thought smaller. <sup>white</sup> underneath on face, sides of neck, rest of ventral; clear undertail coverts (I think, pale). Underwing mostly white with black (small amount) on leading edge secondary wing part. Brown black to jet black on primary wing parts (coverts ~~all~~ appeared lighter on primaries); secondary coverts, back + lower back grey to grey-brown; tail dark (?) (?) neck was white on sides and grey to lite grey above; cap was dark (grey or brown or dark - depending on observer). Had a large fast type flight but no arching; <sup>one observer felt it a shearwater flight</sup> a quicker flight than previous Shearwater sp. but <sup>with steadier, heavier wingbeats</sup> a ~~straight wings~~. Bird had stocky build. Birds didn't tilt on diagonal in flight; a even, steady flight.





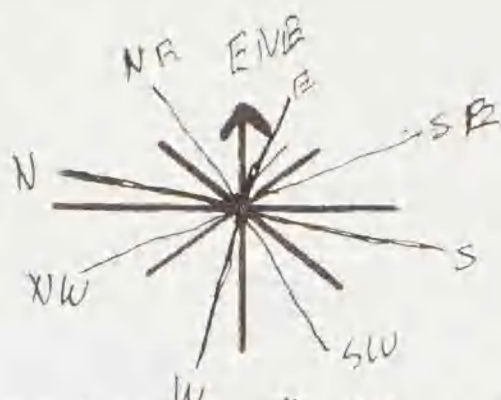
DATE 16 November 1964  
Pg. # 1

0700 commenced watch

time	species	#	dir.	hgt.	remarks	loc.
0645	Wedge-tailed Shearwater	2	ENE	low		
0705					apparent sunrise	
0733	Great Frigatebird	1	↻	1000'ca.	male	
0743	Pterodroma	1	NE	low		
0759	Large Pterodroma	1	NE	low		
0801	Terns	7	NE	<del>medium</del>	Feeding	
0806	Large Pterodroma	1	NE	low		
0807	Wedge-tailed Shearwater	1	NE	low		
0828	Shearwater	1	S	low		
0840	Wedge-tailed Shearwater	1	NE	low		
0843	<del>Shearwater/petrel</del> Wedge-tailed Shearwater	<del>1</del> 1	<del>NE</del> NE	<del>low</del> low		
0858	Leach's/Harcourt's Storm Petrel	1	S	low		
0917	White-tailed Tropicbird (adult)	1			sitting on water - did not flush	
0922	Shearwater/Petrel	1	NW			
0926	Flock - Sooty Tern 15 ± Fairy Tern 5 ± Great Frigatebird 1 ♀ Wedge-tail Shearwater 3 Pterodroma 1 Shearwater/Petrel 2				Feeding	
0937	Kermadec Petrel	1	NW		light phase	
1006	Shearwater/Petrel	1	NE			
1022	Red-tail Tropicbird	1	10'			
1035	Black-footed Albatross	1			dark phase still present 1430	
1055	White-tail Tropicbird	1			collected by Gould; pick up took 50 minutes; lost long net-pole	
1115	" "	5			circling ship	



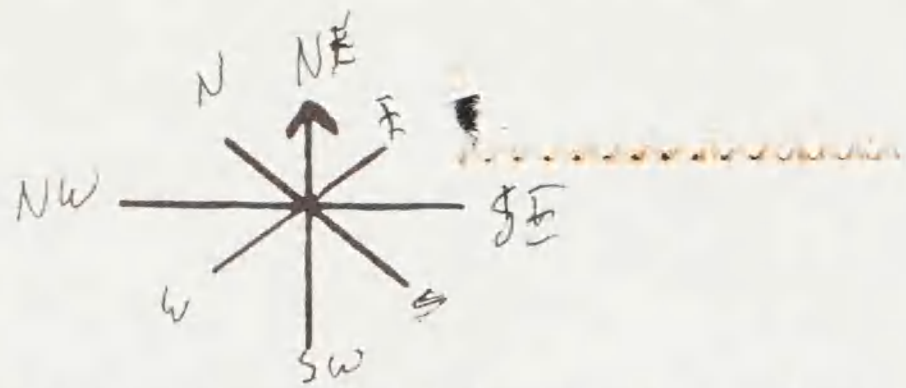
1525 NE

DATE 16 Nov 1964  
Pg. # 2

time species # dir. hgt. remarks loc.

1205	White-tailed Tropicbird (adult)	1	NE		flushed from water	
1233	Wedge-tailed Shearwater	2	W	low		
	Sooty Tern	1	W	low		
1237	Sooty Tern	1	N	low		
1237	Taeger sp?	1	W	low	imm.	
1240	Golden Plover	1	G	80'	calling	
1301	Masked Booby	1	NE	low-med.	- 4d.	
1303	Leach's/Harcourt's Storm Petrel	1	S	low		
1328	Cook's/Bonin Petrel	1	N	low		
1335	Christmas Island Shearwater	1	S	low		
1400	Sooty Tern	2	SE	low-medium		
1404	Fairy Tern	1	<del>NE</del>	medium	feeding	diving into surface repeatedly; photo sketchily
	Shearwater/petrel	1	N	low		raphel
1435	Wedge-tailed Shearwater	5	CA	low	flushed from water	feeding observed
	Leach's/Harcourt's Storm Petrel	1	CA	low		
1439	White-tailed Tropicbird	1	CA	300'ca.	photographed well.	
1444	Wedge-tailed Shearwater	1	CA	low		
1444	Shearwater/petrel	1	CA	low		
1513	Wedge-tail Shearwater	1	W	low		
1518	Frigate bird	1	SE	high		
1524	---	---	NE		Flock - non-feeding	
					Wedge-tailed Shearwater	1 - low
					Cook's Petrel	1 - low
					Sooty Terns	7 - up+down
					Fairy Terns	2 - med-high
1528	Kermadec Petrel	1	NE	low	Dark Phase	
1533	Sooty Terns	9	NE	up+down.		





DATE 16 Nov 1964  
Pg. # 3

time species # dir. hgt. remarks loc.

1543 Shearwater/Petrel 1 S low

1624 Wedge-tailed Shearwater 1 SE low

1629 Leach's/Harcourt's Petrel 1 S low

1632 Greater Frigate 1 NW High

1637 Wedge-tailed Shearwater 2 W low

1637 Small Pterodroma 1 W low

1656 Sooty(?) Shearwater 1 S low + scaling

1706 FEEDING FLOCK G Frigates - 2 High  
Great Frigatebird 2 Terns (probably Sooty) - 35 ± 10 - up + down  
Shearwater/Petrel 2 ~~Wedge~~ Probably much more

1715 Leach's/Harcourt's Storm Petrel 1 S low

1721 Wedge-tailed Shearwater 1 S low

1725 Newell's Shearwater 1 S "

1730 Sooty Shearwater 1 S " scaling

1732 " 1 S "

1734 Sooty Tern 1 W 20'

1734 " " 1 G 20'

1734 White-tailed Tropicbird 1 G 100'

1735 Shearwater/Petrel 1 SE low

1753 Wedge-tailed Shearwater 1 SE low

1806 " 1 SE low



DATE 2 NOV 1964

Time at sunrise = Position at sunrise =

Time at sunset = 1800 Position at sunset = 20-48.0N 158-52.0W

Miles traveled from 0000 hours to sunrise =

~~Miles traveled from sunrise to sunset~~ = 64  
*DEPARTURE TO*

Miles traveled from sunset to 2400 hours = 53

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1145W	VISUAL	158-01.5W	21-08.0N
2.	1245W	LORAN	158-06.0W	21-00.0N
3.	1434W	LORAN	158-23.0W	20-58.5N
4.	1835W	CELESTIAL	158-58.0W	20-46.5N
5.	1925W	LORAN	159-05.0W	20-43.5N
6.				

DATE 3 NOV 1964

Time at sunrise = 0645 Position at sunrise = 19-59.5N 160-49.5W

Time at sunset = 1814 Position at sunset = 19-26.0N 162-16.0W

Miles traveled from 0000 hours to sunrise = 65

Miles traveled from sunrise to sunset = 90

Miles traveled from sunset to 2400 hours = 57

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0634W	CELESTIAL	160-47.0W	20-00.0N
2.	0950W	CEL. & LORAN	161-10.0W	19-52.5N
3.	1155W	LORAN	161-17.0W	19-50.0N
4.	1505W	LORAN	161-46.0W	19-38.0N
5.	1852W	LORAN	162-23.0W	19-21.0N
6.				



DATE 4 NOV 1964

Time at sunrise = 0658 Position at sunrise = 18-37.0N 164-14.5W  
 Time at sunset = 1830 Position at sunset = 17-59.0N 166-05.0W  
 Miles traveled from 0000 hours to sunrise = 65  
 Miles traveled from sunrise to sunset = 112  
 Miles traveled from sunset to 2400 hours = 53

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0643W	CELESTIAL	164-13.0W	18-37.0N
2.	0740W	LORAN	164-22.0W	18-32.5N
3.	1003W	CEL. & LORAN	164-46.0W	18-25.0N
4.	1150W	LORAN	165-03.0W	18-19.0N
5.	1455W	LORAN	165-33.5W	18-08.5N
6.	1900W	CELESTIAL	166-10.0W	17-57.5N

DATE 5 NOV 1964

Time at sunrise = 0712 Position at sunrise = 17-14.0N 168-01.0W  
 Time at sunset = 1845 Position at sunset = 16-20.0N 169-18.5W  
 Miles traveled from 0000 hours to sunrise = 67  
 Miles traveled from sunrise to sunset = 101  
 Miles traveled from sunset to 2400 hours = 46

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0653W	CELESTIAL	167-58.0W	17-15.5N
2.	1122W	CEL & LORAN	168-38.0W	16-58.0N
3.	1450W	CEL & LORAN	169-09.5W	16-44.5N
4.	1555W	RADAR & VIS	169-17.5W	16-41.0N
5.	1610W	RADAR & VIS	169-21.0W	16-38.0N
6.	1926	CEL & LORAN	169-18.5W	16-13.5N

Time at closest point to Johnston = 1610  
 miles from Johnston at closest point = 12 miles

1150 169-25 168-41  
 2120 16-21 169-15



DATE

6 NOV 64

Time at sunrise = 0717 Position at sunrise = 14-33.2N 169-06.2W  
Time at sunset = 1853 Position at sunset = 13-16.0N 170-10.0W  
Miles traveled from 0000 hours to sunrise = 61  
Miles traveled from sunrise to sunset = 100  
Miles traveled from sunset to 2400 hours = 45

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0655W	CELESTIAL	169-06.7W	14-35.5N
2.	1040W	CEL + LORAN	169-14.0W	14-11.0N X
3.	1150W	CEL + LORAN	169-19.0W	14-03.0N
4.	1600W	CEL + LORAN	169-43.0W	13-34.5N
5.	1922W	CELESTIAL	170-11.0W	13-13.0N
6.				



DATE 7 NOV 64

Time at sunrise = 0720 Position at sunrise = 12-06.0N 171-35.0W

Time at sunset = 1853 Position at sunset = 13-15.0N 171-07.0W

Miles traveled from 0000 hours to sunrise = 63

Miles traveled from sunrise to sunset = 77

Miles traveled from sunset to 2400 hours = 36

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0701W	Celestial	171-32.0W	12-04.0N
2.	0937W	Cel + Loran	171-35.0W	12-17.0N
3.	1137W	Cel + Loran	171-31.0W	12-39.0N
4.	1437W	Cel + Loran	171-21.0W	12-53.0N
5.	1915W	Celestial	171-06.0W	13-18.0N
6.				

DATE 08 NOV 64

Time at sunrise = 0717 Position at sunrise = 14-23.0N 170-12.0W

Time at sunset = 1849 Position at sunset = 15-21.5N 169-49.0W

Miles traveled from 0000 hours to sunrise = 50

Miles traveled from sunrise to sunset = 84

Miles traveled from sunset to 2400 hours = 49

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0656W	Celestial	170-13.5W	14-20.0N
2.	1137W	Cel + Loran	169-49.5W	14-45.0N
3.	1915W	Celestial	169-52.0W	15-23.0N
4.				
5.				
6.				



DATE 9 NOV 64

Time at sunrise = 0723 Position at sunrise = 14°-35'N 171°-29'W  
 Time at sunset = 1900 Position at sunset = 13-36.0N 172-46.5W  
 Miles traveled from 0000 hours to sunrise = 83  
 Miles traveled from sunrise to sunset = 110  
 Miles traveled from sunset to 2400 hours = 43

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0703 W	Celestial	171-28.0W	14°-36.3'N
2.	1150 W	Cel + Loran	171-53.5W	14-03.5N
3.	1547 W	Cel + Loran	172 23.5W	13-33.0N
4.	1932 W	Celestial	172-49.5W	13-39.0N
5.				
6.				

DATE 10 NOV 64

Time at sunrise = 0727 Position at sunrise = 14-55.0N 172-17.5W  
 Time at sunset = 1855 Position at sunset = 15-51.0N 171-14.5W  
 Miles traveled from 0000 hours to sunrise = 55  
 Miles traveled from sunrise to sunset = 83  
 Miles traveled from sunset to 2400 hours = 43

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0710 W	Celestial	172-19.5W	14-53.5N
2.	1147 W	Cel + Loran	171-53.5W	15-14.0N
3.	1637 W	Cel + Loran	171-22.3	1545.5N
4.	1915 W	Cel + Loran	171-12.5	15-52.5N
5.				
6.				



DATE 11 NOV 64

Time at sunrise = 0727 Position at sunrise = 16-21.5N 172-00.5W  
 Time at sunset = 1900 Position at sunset = 15-00.0N 173 21.0W  
 Miles traveled from 0000 hours to sunrise = 65  
 Miles traveled from sunrise to sunset = 113  
 Miles traveled from sunset to 2400 hours = 52

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0712 W	Celestial	172-01.0W	16-21.0N
2.	1215 W	Cel + Loran	172-24.0W	15-55.0N
3.	1900 W	Loran	173 21.0W	15-00.0N
4.				
5.				
6.				

DATE 12 NOV 64

Time at sunrise = 0735 Position at sunrise = 16-05.0N 173-10.0  
 Time at sunset = 1855 Position at sunset = 16-45.5N 172-14.5  
 Miles traveled from 0000 hours to sunrise = 75  
 Miles traveled from sunrise to sunset = 72  
 Miles traveled from sunset to 2400 hours = 31

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0750 W	LORAN	173-10.0W	16-06.0N
2.	0940 W	Cel + LORAN	173-13.0W	16-09.0N
3.	1052 W	" "	173 05.0W	16-17.0N
4.	1110 W	" "	172 59.0W	16-21.0N
5.	1600 W	" "	172 34.5W	16-47.0N
6.	1755 W	" "	172 19.0W	16-45.0N
7	1855	LORAN	172 10.0W	16 45.0N



18 NOV = 85

DATE 13 NOV 64

Time at sunrise = 0727 Position at sunrise = 16-50.0N 170-51.0W  
Time at sunset = 1840 Position at sunset = 16-53.5N 169-19.5W  
Miles traveled from 0000 hours to sunrise = 50  
Miles traveled from sunrise to sunset = ~~84~~ 89.8  
Miles traveled from sunset to 2400 hours = 42

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	1-0730W	LORAN	170-50.0W	16-49.5N
2.	2-0925W	LORAN	170 38.0W	16-49.5N
3.	3-1145W	LORAN+CEL	170 22.0W	16-49.0N
3.	4-1356W	LORAN+CEL	170 03.5W	16-48.5N
4.	5-1530W	VIS + RADAR	169-51.0W	16-48.5N
5.	6-1720W	" "	169-36.5W	16-50.0N
5.	7-1750W	" "	169-32.0W	16-51.0N
6.	8-1905W	" "	169-21.5W	16-54.5N

DATE 14 NOV 64

Time at sunrise = 0717 Position at sunrise = 17-31.5N 167 48.0W  
Time at sunset = 1828 Position at sunset = 18-07.0N 166-17.0W  
Miles traveled from 0000 hours to sunrise = 58  
Miles traveled from sunrise to sunset = 95  
Miles traveled from sunset to 2400 hours = 45

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0703W	Celestial	167-50.0W	17-32.0N
2.	0903W	Loran+Cel	167-33.0W	17-38.5N
3.	1020W	Loran	167-23.0W	17-42.5N
4.	1143W	Loran	167 13.0W	17-46.5N
5.	1547W	Loran	166-41.0W	17-56.5N
6.	1820W	Loran	166-20.5W	18-05.5N
7.	1904W	Loran+Cel	166-19.5W	18-08.5N



DATE 15 NOV 64

Time at sunrise = 0706 Position at sunrise = 18-49.5N 164-33.3W

Time at sunset = 1826 Position at sunset = 19-14.5N 163-08.5W

Miles traveled from 0000 hours to sunrise = 62

Miles traveled from sunrise to sunset = 85

Miles traveled from sunset to 2400 hours = 51

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0745W	LORAN	164-57.5W	18-50.5N
2.	0955W	LORAN	164-09.0W	18-57.5N
		LORAN	<del>163-52.3W</del>	
3.	1145W	→	163-52.3W	19-02.5N
4.	1616W	LORAN	163-25.5W	19-09.5N
5.	1743W	LORAN	162-55.5W	19-17.5N
6.				



DATE

16 NOV 0705

Time at sunrise = 0615 Position at sunrise = 19-49.3N 161-24.0W

Time at sunset = 1754 Position at sunset = 20-26.0N 159-53.5W

Miles traveled from 0000 hours to sunrise = 49

Miles traveled from sunrise to sunset = 92

Miles traveled from sunset to 2400 hours = 53

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0745W	LORAN	161-10.5W	19-54.5N
2.	1006	LORAN	160-50.0W	20-03.5N
3.	1145	LORAN	160 43.0W	20 05.5N
4.	1355	LORAN	160 28.0W	20-12.0N
5.	1600	LORAN	160 10.5W	20-19.0N
6.	1905	LORAN	159 43.0W	20 30.0N

DATE

17 NOV 64

Time at sunrise = 0645 Position at sunrise = 20 59.0N 158-08.5W

Time at sunset = Position at sunset =

Miles traveled from 0000 hours to sunrise = 54

Miles traveled from sunrise to <sup>PH</sup> sunset = 20

Miles traveled from sunset to 2400 hours =

	TIME OF FIX	TYPE OF FIX	LONGITUDE	LATITUDE
1.	0636W	LORAN	158-09.5	20 58.5N
2.	0740W	VISUAL	158-06.5	20 59.5N
3.	0822W	VISUAL	158-03.0W	21-04.5N
4.	0851W	VISUAL	158-00.5	21-09.0N
5.				
6.				



MONTHLY REPORT OF AT-SEA SURVEY

NOVEMBER

Pacific Ocean Biological Survey

Division of Birds  
Smithsonian Institution  
Washington 25, D. C.



This report is based on results and observations made on the sixteenth of a monthly series of investigations of the flora and fauna in a particular study area of the Central Pacific Ocean. Observations covered a period of fifteen days, 2 November-17 November, 1964. The areas investigated were the same as last month.

Five members of the Smithsonian Institution Pacific Biological Survey Program participated in the survey; Patrick Gould (Biologist in Charge), David Brattley, Paul DuMont, Robert Sundell, Douglas Whitman. Alan Young and Robert Banner, engaged in oceanographic studies, represented Dr. Maxwell Doty of the University of Hawaii.

An additional feature of the trip was the 16 mm. motion photography of birds by Mr. J. D. Whitman.



# TIME AND MILAGE OF DIURNAL OBSERVATIONS OUTSIDE THE GRID

Date	Total Miles Covered	Total Hours Spent
02	64	7.8
03	90	11.5
04	112	11.5
05	101	11.5
13	89	11.2
14	95	11.2
15	85	11.3
16	92	11.7
Total	728	87.7

# TIME AND MILAGE OF DIURNAL OBSERVATIONS INSIDE THE GRID

Date	Total Miles Covered	Total Hours Spent
06	100	11.6
07	77	11.6
08	84	11.5
09	110	11.6
10	83	11.5
11	113	11.6
12	72	11.3
Total	639	80.7

87.7  
80.7  
168.4

728  
1362

168  
1362  
1530



## SPECIES ACCOUNT

A total of 23 species, plus one identifiable subspecies, was identified on this trip. Twelve species were identified within the grid and an average of 6.7 species per day was recorded. One new species, Pale-footed Shearwater, was added to the comprehensive list of Birds found within the grid.

An overall decline in numbers of birds this month reflects the fewer number of migrants passing through the area, and the departure of other species that are either preparing to breed in southern waters or have finished breeding in this area. This decline was particularly noticable in the area of Johnston Atoll. The difference between this month and the same month of 1963 is also mostly due to the difference in migratory birds. It is my opinion that the figures for 1964 more nearly represent the "normal" situation than do those of 1963.

### Black-footed Albatross (Diomedea nigripes)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	0	0	0
Non-Grid	0	3	5

The arrival of this species, for its breeding season, was about 12 days later this year than last. It appears, however, that this species may be expected to show up in the area anytime in early November with possibly a few early arrivals appearing in October. No specimens were collected.



Wedge-tailed Shearwater (Puffinus pacificus)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	77	182	34
Non-Grid	118	501	74

The reasons for the greater numbers of birds this month as compared with October and last November are obscure at the present time. It perhaps represents a late influx of migratory birds from outside the area. No specimens were collected.

Sooty Shearwater (Puffinus griseus)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	1476	144	573
	25	904	1054

The peak of migration for this species occurred one month earlier this year than last, but with the total period covered extended by at least one month. Poor weather conditions could be responsible for last years later and more compact migration. It is suspected that this years figures are most typical. One specimen was collected.

Christmas Island Shearwater (Puffinus nativitatus)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	1	3	0
Non-Grid	3	4	0

The total numbers of this species are so low that it is impossible to determine distribution patterns from them. The apparent increase this month may be due to improved identification ability on the part of the observers.

Newell's Shearwater (Puffinus puffinus)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	0	0	2
Non-Grid	9	1	2



As with the above species the small number of observations makes accurate discussion impossible. The low number, however, is a continuation of the steady decline in numbers for this species.

Pale-footed Shearwater (Puffinus

A bird, well seen, was identified as this species on 13 November within 50 miles of Johnston Atoll. Several have been identified from the Cromwell area in the past and a specimen was taken along the Leeward Islands in September.

Bonin Island Petrel (Pterodroma hypoleuca)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	0	0	?
Non-Grid	3	1	?

As suspected these birds are rare, but perhaps regular, within the area as a whole. No specimens were collected.

Cook's Petrel (Pterodroma cookii)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	12	11	?
Non-Grid	52	47	?

These figures indicate a fairly stable population level for October and November. No specimens were collected.

Dark-rumped Petrel (Pterodroma phaeopygia)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	0	0	?
Non-Grid	1	1	?

These figures are too small to evaluate, but do confirm the suspicion that these birds do occur, at least in small numbers, within the area. No specimens were collected.



Juan Fernandez Petrel (Pterodroma externa externa)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	45	31	15
Non-Grid	27	0	25

This years drop off in numbers of birds in November probably indicates an earlier departure date, perhaps due to weather conditions, than was expected from last years data. No specimens were collected.

White-necked Petrel (Pterodroma externa cervicalis)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	34	3	39
Non-Grid	27	0	25

Unlike the November increase in 1963, there was a sharp decrease in numbers of birds this month. As with the above race this indicates an earlier departure date for this species this year. No specimens were collected.

Kermadec Petrel (Pterodroma neglecta)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	1	1	3
Non-Grid	4	4	2

This indicates a rather stable population level for October and November as was the case in 1963. No specimens were collected.

Harold's Petrel (Pterodroma

One bird~~s~~ was tentatively identified as belonging to this species on 4 November, southwest of Oahu. No specimens were collected.

Leaches Storm Petrel (Oceanodroma leucohora)  
or

Harcourts Storm Petrel (Oceanodroma castro)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	0	3	1
Non-Grid	100+	6	6



As shown in previous reports a majority of the white-rumped Storm Petrels observed in this area are probably O. leucorhoa. The figures for 1963 and 1964 are quite comparable and indicate the return of birds from their arctic breeding grounds. No specimens were collected.

Red-tailed Tropicbird (Phaethon rubricauda)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	27	12	37
Non-Grid	10	3	8

The peculiar fluctuation in numbers of birds of this species from month to month is still unexplainable and consequently unpredictable. They are, however, quite regular and widely spread at any time of the year within this area. No specimens were collected.

White-tailed Tropicbird (Phaethon lepturus)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	0	3	3
Non-Grid	20	12	3

As with the preceeding species the fluctuation in numbers of birds is still unexplainable. One specimen was collected.

Blue-faced Booby (Sula dactylatra)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	4	4	4
Non-Grid	11	2	2

The expected increase in numbers this month did not occur, although within the grid at least, their numbers remained constant. One specimen was collected.



Brown Booby (Sula leucogaster)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	1	0	1
Non-Grid	3	2	2

No change in status can be observed in this species. No specimens were collected.

Red-footed Booby (Sula sula)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	0	4	39
Non-Grid	13	1	11

Although the expected arrival of this species within the grid did occur, the population level was far below that of 1963. No explanation is available at this time. No specimens were collected.

Great Frigatebird (Fregata minor)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	4	15	2
Non-Grid	70	32	13

The vacillation in numbers of this species from month to month, as with the Tropicbirds, is unexplainable at this time. No specimens were collected.

Golden Plover (Pluvialis dominica)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	36	0	13
Non-Grid	13	1	11

The almost complete lack of sightings indicates, as does the lack of Ruddy Turnstones and low Sooty Shearwater numbers, that migrants from northern areas were early this year, most coming through in October. No specimens were collected.



Sooty Tern (Sterna fuscata)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	236	4	132
Non-Grid	123	270	54

The expected decline in numbers from October did occur, however, the almost complete absence of birds from the grid as compared with November 1963 is unexplainable at this time and is probably due to sampling error. It does, however, follow the pattern observed in other species by being a month ahead of last years schedule. No specimens were collected.

Common Noddy Tern (Anous stolidus)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	1	0	1
Non-Grid	13	5	4

There is probably no significant difference between the number of birds found this month than in either October, 1964 or November, 1963. No specimens were collected.

Fairy Tern (Gygis alba)

	<u>Oct., 1964</u>	<u>Nov., 1964</u>	<u>Nov., 1963</u>
Grid	0	0	1
Non Grid	1	8	3

No evaluation of these figures is possible at the present time. No specimens were collected.



ABUNDANCE OF SPECIES GROUPS WITHIN THE GRID

<u>Group</u>	<u>No. birds</u>	<u>Birds/Sq. Mi.</u>	<u>est. Pop.</u>	<u>% of total birds</u>
Shearwater-Petrel	545	0.43	21,300	92
Terns	4	0.002	100	01
Boobies	8	0.01	310	01
Tropicbirds	17	0.01	660	03
Frigatebirds	14	0.01	275	02
Storm Petrels	3	0.005	230	01
Total Birds	602	0.47	23,500	100



# DIURNAL ABUNDANCE OF BIRDS WITHIN GRID QUADRANTS

North		South		East		West	
<u>No. Birds</u>	<u>No. Miles</u>	<u>No. Birds</u>	<u>No. Miles</u>	<u>No. Birds</u>	<u>No. Miles</u>	<u>No. Birds</u>	<u>No. Miles</u>
135	153	226	187	123	184	118	115
<u>Birds per linear mile</u>		<u>Birds per linear mile</u>		<u>Birds per linear mile</u>		<u>Birds per linear mile</u>	
0.8824		1.2086		0.6685		1.0261	

# DIURNAL ABUNDANCE OF BIRDS WITHIN 50 MILES OF JOHNSTON ATOLL

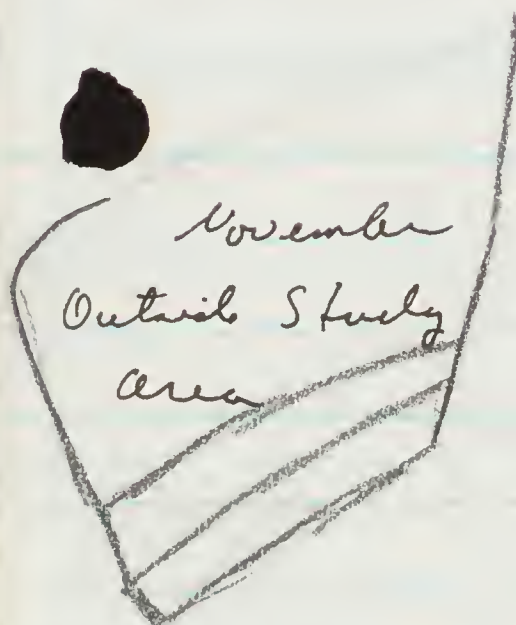
<u>Date</u>	<u>No. Miles</u>	<u>No. Birds</u>	<u>No. Wedge-taile</u>	<u>No. Sooty Terns</u>	<u>Birds per Square Mile</u>
05 Nov.	60	87	13	0	0.725
13 Nov.	61	13	4	0	0.11
Total	121	100	17	0	0.41



November  
Fossil Study  
Area



Date	minutes	hours	miles	m/hr.
N 5	333	5.6	46	8.2
N 7	692	11.5	137	11.9
N 8	700	11.7	84	7.2
N 9	698	11.6	73	6.3
N 10	718	11.9	101	8.5
N 11	693	11.6	90	7.8
N 12	598	10.0	61	6.1
total	4432	73.9	592	56.0
Average	633.1	10.1	84.6	8.0



Date	minutes	hours	miles	m/hr.
N 1	420	7.0	70	10.0
N 2	739	12.3	97	7.9
N 3	692	11.5	85	7.4
N 4	693	11.6	83	7.2
N 5	362	6.0	56	9.3
N 6	689	11.5	98	8.5
N 12	77	1.3	10	7.7
N 13	675	11.3	99	8.8
N 14	671	11.2	127	11.3
N 15	711	11.9	112	9.4
N 16				
total	5729	94.3	927	77.6
* Average	625.0	10.5	91.9	8.8
* not including N 12				



7  
8. 8  
9  
79, 2



November  
Inside Study  
Area

Date	# Sightings	# Birds	# Flocks	# Birds in Flocks
N5	14	314	2	302 151
N7	31	60	2	28 14
N8	37	100	2	62 31
N9	84	350	9	257 206
N10	102	623	* 24	517 246
N11	83	331	23	252 111
N12	51	123	6	75 45
Total	402	1901	67	1493
Average	57.4	271.6	9.3	213.3

November  
Outside Study  
Area

Date	# Sightings	# Birds	# Flocks	
N1	58	390	2	310 150
N2	142	1670	19	1513 716
N3	86	165	* 67	70 100
N4	34	109	1	71 11
N5	14	14	0	—
N6	39	88	3	44 117
* N12	5	5	0	—
N13	82	136	5	44 116
N14	39	44	1	5 50
N15	29	56	1	23 110
N16				
Total	523	2672	39	2080
* Average	58.1	296.9	4.3	231.1

\* this does not include the ~~two~~ days of ~~the~~ N12







## DECK LOG SHEET - TYPE B

USS GRD EASTMAN (YAG 39) ZONE DESCRIPTION +10W DATE Monday 2 Nov 19 64  
(Day) (Date) (Month)

AT/PASSAGE FROM \_\_\_\_\_ TO \_\_\_\_\_

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (feet)
01	050	10	10	BKN	2995	70	64	8	1800	SC			
02	050	10	10	BKN	2995	71	66	7	1800	CU			
03	050	10	10	BKN	2992	73	67	7	1800	CU			
04	035	8	10	BKN	2990	75	69	7	2000	CU			
05	045	8	8	R	2988	78	71	6	1500	ST			
06	056	8	8	R	2988	77	71	8	1500	ST			
07	035	5	10	BKN	2990	78	72	9	2500	SC			
08	050	6	10	SC	2990	78	72	5	2000	CU			
09	045	6	10	SC	2991	80	78	3	2000	CU			
10	080	3	10	SC	2992	80	77	2	1800	SC	84	060	2
11	080	5	10	SC	2992	80	78	2	1800	SC	84	060	2
12	060	4	10	SC	2992	79	78	3	1800	SC	84	060	2
13	100	6	10	SC	2992	80	78	3	1800	SC	84	060	2
14	100	6	10	SC	2992	81	78	2	1800	SC	84	060	2
15	080	7	10	SC	2992	80	78	2	1800	SC	84	060	2
16	080	4	10	SC	2992	80	78	3	7000	AC	84	120	3
067 17	247	5	15	SC	2994	81	75	3	2500	CU/AL	84	247	3
068 18	247	5	15	SC	2997	78	75	3	2500	CU	84	247	3
19	067	3	10	SC	2997	78	70	3	2500	CU	83	067	3
20	061	5	10	SC	2997	78	70	3	2200	CU	83	065	2
21	061	4	10	SC	2998	77	70	3	2200	CU	83	065	2
22	064	4	10	SC	2999	76	69	2	2200	CU	83	065	3
23	065	4	10	SC	3000	75	69	3	2000	CU	85	065	3
24	065	8	10	SC	3000	76	74	3	2000	CU	85	065	3

POSITION	ZONE	TIME
0800		
L _____	HY _____	
λ _____	BY _____	
1200		
L <u>21 06 N</u>	BY <u>3</u>	
λ <u>158 03 W</u>	BY <u>3</u>	
2000		
L <u>20 41.5 N</u>	BY <u>1,2,4</u>	
λ <u>159 10.5 W</u>	BY <u>1,2,4</u>	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM _____	(ZT) (Date)
TO _____	(ZT) (Date)
SET _____	
DRIFF _____	
POSITION BETWEEN FIXES	
MID. L _____	
MID. λ _____	

MILES STEAMED  
0000-2400FUEL CONSUMED  
0000-2400

## REMARKS

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



NAVPERs 720 (Rev. 4-56)

### ADDITIONAL REMARKS

UNITED STATES SHIP

(Day) (Date) (Month), 19

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR

TO BE FORWARDED TO THE BUREAU OF NAVAL PERSONNEL AT THE END OF EACH MONTH



## DECK LOG SHEET - TYPE B

ISS 222 EASTMAN (4222) ZONE DESCRIPTION 7100W DATE TUESDAY 3 NOV 19 64  
(Day) (Date) (Month)  
AT/PASSAGE FROM PERL TO CP AREA

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (knots)				Dry bulb	Wet bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (Feet)
01	045	8	10	SC	2996	76	72	2	1800	SC	83	75	3
02	065	8	10	SC	2996	76	72	2	1800	SC	83	75	3
03	070	6	10	SC	2996	78	75	2	1800	SC	80	090	3
04	073	4	10	SC	2995	79	78	3	3000	SC	79	090	3
05	068	7	10	SC	2994	79	77	3	3000	SC	80	090	3
06	090	7	10	SC	2997	78	74	4	4000	AC	79	090	3
07	090	5	10	SC	2996	78	75	4	4000	AC	79	095	3
08	090	5	10	SC	3000	76	71	5	2500	CU	84	095	3
059 09	039	10	10	SC	3001	77	75	4	2500	CU	84	090	3
10	090	15	15	SC	3000	77	74	3	2500	CU	84	080	3
11	055	15	15	SC	3000	77	75	5	2500	CU	84	085	3
12	055	15	10	SC	2999	79	76	5	2200	CU	84	080	3
13	060	7	10	SC	2997	82	77	5	2000	CU	84	080	3
14	065	6	10	SC	2995	85	79	5	2000	CU	84	080	2
15	070	4	10	SC	2993	86	79	5	2000	CU	84	080	2
16	070	6	10	SC	2993	85	80	5	2000	CU	84	080	4
17	070	6	10	SC	2993	85	80	5	2000	CU	84	080	4
18	058	19	10	SC	2995	80	74	5	2000	CU	83	080	4
19	075	30	10	SC	2994	80	75	5	2000	CU	81	080	4
20	080	10	10	SC	2998	77	74	4	2000	CU	84	090	3
21	085	10	10	SC	2999	78	75	4	2000	CU	84	090	3
22	080	10	10	SC	2999	77	74	3	2000	CU	84	095	3
23	040	15	10	SC	2997	77	74	3	2000	CU	84	080	3
24	040	13	10	SC	2997	76	73	3	2000	CU	84	080	3

POSITION	ZONE	TIME
0800		
L <u>19-50.0N</u>	BY <u>1,4</u>	
A <u>161-01.0W</u>	BY <u>1,4</u>	
1200		
L <u>19-48.5N</u>	BY <u>2,4</u>	
A <u>161-19.0W</u>	BY <u>2,4</u>	
2000		
L <u>19-17.5N</u>	BY <u>1,2,4</u>	
A <u>162-32.2W</u>	BY <u>1,2,4</u>	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D, R.

CURRENT DATA	
FROM	(Date)
TO	(Date)
SET	
DRIFT	
POSITION BETWEEN FIXES	
MID. L	
MID. A	

MILES STEAMED  
0000-2400

FUEL CONSUMED  
0000-2400

## REMARKS

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_ (Day) (Date) (Month) , 19\_\_\_\_

APPROVED: \_\_\_\_\_ EXAMINED: \_\_\_\_\_  
\_\_\_\_\_  
U.S.N. COMMANDING U.S.N. NAVIGATOR



## DECK LOG SHEET - TYPE B

ISS USS K-14 (YAG-40) ZONE DESCRIPTION 1000 DATE 2/4/64 (Day) (Date) (Month) 19 64

AT/PASSAGE FROM \_\_\_\_\_ TO \_\_\_\_\_

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISIBILITY (Miles)	WEATHER (Symbols)	BAROMETER (Inches)	TEMPERATURE		CLOUDS			SEA WATER TEMPERATURE	WAVES	
	DIRECTION (True)	SPEED (knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIRECTION (True)	HEIGHT (Feet)
01	050	10	10	SC	2996	76	73	5	1000	CU	84	080	2
02	050	9	10	SC	2994	76	73	3	2000	CU	84	080	2
03	060	8	10	SC	2993	77	73	3	2000	CU	84	080	3
04	060	8	10	SC	2991	76	73	3	1500	CU	84	080	1
05	070	8	10	SC	2991	75	72	3	1500	CU	84	080	1
06	070	20	10	SC	2993	76	73	5	1500	CU	84	080	2
07	100	21	10	SC	2993	76	73	4	3000	CU	84	120	3
08	075	20	10	SC	2993	76	73	4	2000	CU	84	120	3
09	090	18	10	SC	2993	76	73	5	2000	CU	84	120	4
10	110	15	10	SC	2992	77	73	4	2000	CU		130	4
11	100	16	10	SC	2992	77	73	3	3000	CU		150	3
12	100	20	15	SC	2995	82	77	5	2000	CU	84	070	3
13	160	14	15	SC	2991	84	79	6	2000	CU	85	069	3
14	065	10	15	SC	2990	83	79	5	2000	CU	85	070	3
15	100	10	15	SC	2990	83	78	5	2000	CU	85	075	3
16	350	10	10	SC	2990	83	78	5	2000	CU	85	080	3
17	350	10	12	SC	2990	83	78	6	2000	CU	85	080	3
18	100	10	12	SC	2991	81	80	6	2000	CU	85	100	3
19	100	8	10	SC	2992	80	79	5	2000	CU	85	100	3
20	100	10	10	SC	2993	80	77	3	2000	CU	85	110	2
21	100	14	10	SC	2994	79	77	4	2000	CU	85	110	2
22	090	11	10	SC	2994	78	76	3	4000	CU	84	100	3
23	090	20	10	SC	2995	77	75	3	4000	CU	85	100	3
24	090	20	10	SC	2993	77	76	3	2500	CU	86	095	3

POSITION	ZONE	TIME
0800		
L <u>18-32.0N</u>	BY <u>1,2,4</u>	
λ <u>164-25.5W</u>	BY <u>1,2,4</u>	
1200		
L <u>18-18.0N</u>	BY <u>2,4</u>	
λ <u>165-05.0W</u>	BY <u>2,4</u>	
2000		
L <u>17-53.8N</u>	BY <u>1,4</u>	
λ <u>166-19.5W</u>	BY <u>1,4</u>	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM _____	(Date)
(ZT)	
TO _____	(Date)
(ZT)	
SET _____	
DRIFT _____	
POSITION BETWEEN FIXES	
MID. L _____	
MID. λ _____	

MILES STEAMED  
0000-2400

FUEL CONSUMED  
0000-2400

## REMARKS

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP

(Day)(Date)(Month), 19



## DECK LOG SHEET - TYPE B

USS GEO EASTMAN (YAG-39) ZONE DESCRIPTION +10W DATE THURSDAY 5 NOVEMBER 19 64  
AT/PASSAGE FROM PEARL HARBOR, HAWAII TO DEPARTURE POINT

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI-BIL-ITY (Miles)	WEATH-ER (Sym-bols)	BAROM-ETER (Inches)	TEMPER-ATURE		CLOUDS			SEA WATER TEMPER-ATURE	WAVES	
	DIREC-TION (True)	SPEED (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIREC-TION (True)	HEIGHT (Feet)
01	091	24	10	SCT	29.91	78	75	3	2600	CU	85	080	3
02	090	24	10	SCT	29.91	77	76	4	2500	CU	85	085	3
03	090	20	10	SCT	29.91	76	76	3	2500	CU	85	090	3
04	090	18	10	SCT	29.89	77	74	3	2500	CU	85	090	3
05	090	15	10	SCT	29.87	77	74	3	2200	CU	85	090	3
06	090	16	10	SCT	29.86	77	73	3	2000	CU	85	090	3
07	080	10	10	SCT	29.88	78	75	3	2000	CU	85	090	3
08	080	10	10	SCT	29.87	78	76	3	2000	CU	85	090	3
09	080	11	10	SCT	29.87	78	76	3	2000	CU	85	090	3
10	070	11	10	SCT	29.87	78	76	3	2000	CU	85	090	3
11	100	10	10	SCT	29.81	81	78	8	2000	CU	85	100	5
12	110	18	10	SCT	29.80	79	77	7	2000	CU	85	110	3
13	104	20	10	SCT	29.89	79	74	7	2000	CU	85	110	3
14	085	20	10	H	29.86	77	75	6	2000	CU	85	090	2
15	103	20	15	BKN	29.84	82	79	9	2000	CU	85	100	3
16	110	14	15	BKN	29.84	81	77	7	2000	CU	85	105	3
17	105	14	15	BKN	29.84	80	77	7	2000	CU	84	105	3
18	105	12	10	BKN	29.84	80	76	7	2000	CU	84	105	3
19	105	12	10	BKN	29.84	78	74	7	2000	CU	84	105	3
20	105	12	10	BKN	29.87	79	77	8	2000	CU	85	105	3
21	105	14	10	BKN	29.88	79	77	8	2000	CU	85	105	4
22	105	14	10	BKN	29.88	79	77	8	2000	CU	85	105	4
23	105	14	10	BKN	29.88	79	77	8	2000	CU	85	105	4
24	066	05	10	SCT	29.86	78	73	4	2600	CU	85	100	3

POSITION	ZONE	TIME
0800		
L	BY	
λ	BY	
1200		
L	BY	
λ	BY	
2000		
L	BY	
λ	BY	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM	(Date)
TO	(Date)
SET	
DRIFT	
POSITION BETWEEN FIXES	
MID. L	
MID. λ	

MILES STEAMED 0000-2400

FUEL CONSUMED 0000-2400
9690

## REMARKS

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_ (Day) (Date) (Month) , 19\_\_\_\_

Lined area for additional remarks.

APPROVED:

EXAMINED:

\_\_\_\_ U.S.N. COMMANDING \_\_\_\_\_ U.S.N. NAVIGATOR



## DECK LOG SHEET - TYPE B

USS Eastman ZONE DESCRIPTION +10W DATE Fri. 6 NOV., 19 64  
(Day) (Date) (Month)  
AT/PASSAGE FROM PEARL HARBOR, HAWAII TO OP AREA

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (Feet)
01	073	22	10	CLR	29.83	77	74	2	2000	CU	85	100	3
02	069	24	10	CLR	29.81	77	73	2	2000	CU	85	110	3
03	083	23	10	CLR	29.80	77	73	1	2000	CU	85	110	4
04	080	19	10	SCT	29.79	77	75	2	1800	CU	85	110	5
05	070	19	10	SCT	29.78	76	75	3	1800	CU	85	115	5
06	085	27	10	SCT	29.77	76	75	4	1800	CU	84	105	5
07	095	20	10	SCT	29.77	76	75	4	1800	CU	84	85	5
08	095	20	10	SCT	29.77	76	76	4	1800	CU	84	100	4
09	010	18	10	SCT	29.80	81	78	4	1500	CU	84	100	4
10	020	17	10	SCT	29.82	80	78	4	1500	CU	84	100	7
11	092	17	10	SCT	29.84	80	77	4	2000	CU	84	095	4
12	090	17	10	SCT	29.81	78	75	4	2000	CU	84	095	5
13	090	14	10	SCT	29.79	81	76	4	2000	CU	85	095	5
14	080	7	10	SCT	29.77	83	79	4	2000	CU	85	095	5
15	080	7	10	SCT	29.75	85	82	4	2000	CU	85	095	5
16	092	21	10	BKN	29.75	80	78	6	2000	CU	85	090	4
17	075	19	10	BKN	29.74	79	75	6	2000	CU	85	100	4
18	061	18	15	BKN	29.76	81	77	6	2000	CU	85	075	3
19	068	18	10	SCT	29.76	79	74	5	2000	CU	85	080	4
20	074	19	10	SCT	29.77	78	75	2	4000	CU	85	080	4
21	082	17	10	SCT	29.79	79	75	3	4000	CU	85	100	4
22	070	30	10	SCT	29.80	79	75	3	2000	CU	85	100	5
23	070	19	10	SCT	29.80	78	74	3	2000	CU	85	100	3
24	070	17	10	SCT	29.81	76	73	4	2000	CU	85	095	3

POSITION	ZONE	TIME
0800		
L _____	HY _____	
$\lambda$ _____	BY _____	
1200		
L _____	BY _____	
$\lambda$ _____	BY _____	
2000		
L _____	BY _____	
$\lambda$ _____	BY _____	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM _____	
(ZT) _____	(Date) _____
TO _____	
(ZT) _____	(Date) _____
SET _____	
DRIET _____	
POSITION BETWEEN FIXES	
MID. L _____	
MID. $\lambda$ _____	

MILES STEAMED	0000-2400
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FUEL CONSUMED
0000-2400

## REMARKS

EXAMINED:

U. S. N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_ (Day) (Date) (Month) , 19\_\_\_\_

[Lined area for additional remarks]

APPROVED: \_\_\_\_\_ EXAMINED: \_\_\_\_\_  
U.S.N. COMMANDING U.S.N. NAVIGATOR



ISS FSU EASTLAND (191739) ZONE DESCRIPTION TLL DATE SAT 2 NOV, 19 68  
(Day) (Date) (Month)

AT/PASSAGE FROM \_\_\_\_\_ TO \_\_\_\_\_

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (knots)				Dry Bulb	Wet- Bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (Feet)
01	090	10	10	CT	29.78	78	74	3	1500	ST	85	070	5
02	090	12	10	CT	29.76	78	73	4	1500	ST	85	070	5
03	090	14	10	CT	29.75	79	73	7	1000	ST	85	070	5
04	076	19	10	CU	29.74	78	75	1	3000	CU	85	070	3
05	072	20	10	SC	29.74	78	75	2	3000	CU	85	070	3
06	075	19	10	SC	29.74	78	75	3	5000	CU	85	070	2
07	070	31	10	SC	29.74	79	76	3	2000	CU	85	070	3
08	065	20	10	SC	29.74	79	76	3	2000	CU	85	065	3
09	085	21	10	SC	29.75	78	76	4	2000	CU	85	055	3
10	095	23	15	SC	29.76	78	76	4	2000	CU	85	060	3
11	089	22	15	SC	29.76	79	76	4	2000	CU	85	075	3
12	099	22	15	SC	29.76	79	76	5	2000	CU	85	085	3
13	089	22	12	SC	29.73	79	76	5	2000	CU	85	085	3
14	089	23	12	SC	29.71	79	76	5	2000	SC	85	085	3
15	089	23	13	SC	29.69	78	76	5	2000	SC	85	085	3
16	090	30	20	SC	29.69	79	76	4	2000	SC	85	085	3
17	110	37	10	SC	29.71	80	76	5	2000	CU	85	110	4
18	132	33	10	SC	29.74	80	76	5	2000	CU	85	110	5
19	120	29	10	SC	29.74	80	75	7	2000	CU	85	110	5
20	060	28	10	SC	29.76	79	75	4	2000	CU	85	100	5
21	050	33	10	SC	29.78	78	76	3	2000	CU	85	095	5
22	065	35	10	SC	29.78	77	74	3	2000	CU	85	085	5
23	060	29	10	SC	29.80	77	74	3	2000	CU	85	080	5
24	070	25	10	SC	29.81	76	73	3	2000	CU	85	080	5

POSITION	ZONE	TIME
0800		
L _____	BY _____	
λ _____	BY _____	
1200		
L _____	BY _____	
λ _____	BY _____	
2000		
L _____	BY _____	
λ _____	BY _____	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM _____	_____
(ZT)	(Date)
TO _____	_____
(ZT)	(Date)
SET _____	_____
DRIFT _____	_____
POSITION BETWEEN FIXES	
MID. L _____	_____
MID. $\lambda$ _____	_____

MILES STEAMED	0000-2400

FUEL CONSUMED 0000-2400

## REMARKS

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_ (Day) (Date) (Month) , 19\_\_\_\_

[Lined area for additional remarks]

APPROVED:

EXAMINED:

\_\_\_\_ U.S.N. COMMANDING \_\_\_\_\_ U.S.N. NAVIGATOR



NAVPERS 720 (Rev. 4-56)

## DECK LOG SHEET - TYPE B

USS GRO. EASTMAN (YAG 39) ZONE DESCRIPTION +10W DATE SUNDAY 8 NOV 19 64  
(Day) (Date) (Month)

AT/PASSAGE FROM OP AKA TO \_\_\_\_\_

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (Feet)
01	080	25	10	Bkn	2980	77	73	7	2000	SC	85	080	4
02	080	25	10	Bkn	2980	77	73	6	1800	SC	85	080	4
03	080	26	10	Bkn	2980	77	73	7	1800	SC	85	080	4
04	080	24	10	Bkn	2977	79	73	7	1800	ST	85	080	5
05	080	25	10	Bkn	2977	79	73	6	1800	ST	85	080	5
06	080	23	10	Bkn	2979	79	73	6	1800	ST	85	080	5
07	080	21	10	Bkn	2981	79	73	6	1800	ST	85	080	5
08	080	15	10	ScL	2982	79	74	3	4000	CU	85	080	4
09	089	13	10	ScL	2982	79	75	3	2000	SC	85	040	4
10	085	11	10	ScL	2982	79	75	4	2000	SC	84	040	4
11	083	13	10	ScL	2983	79	75	4	2000	SC	84	040	3
12	064	29	15	ScL	2982	83	81	4	2000	CU	85	080	4
13	081	28	15	ScL	2982	82	78	4	2000	CU	84	075	4
14	077	29	15	ScL	2981	80	75	5	2000	CU	85	080	4
15	064	30	10	Bkn	2978	79	74	6	1800	CU	84	075	4
16	065	25	10	Bkn	2978	79	74	6	1800	CU	84	075	4
17	065	25	10	Bkn	2979	79	74	6	1800	CU	84	075	4
18	070	15	10	Bkn	2981	79	75	6	1800	CU	84	075	4
19	070	15	10	Bkn	2982	79	74	6	1800	CU	84	075	4
20	093	13	10	Bkn	2984	79	75	8	2000	CU/CS	84	080	5
21	095	18	10	Bkn	2984	79	75	7	2000	CU	84	080	4
22	086	30	10	ScL	2985	80	75	4	2000	CU	84	080	4
23	078	22	10	ScL	2986	80	75	2	2000	CU	84	080	2
24	070	20	10	ScL	2985	79	74	3	2000	CU	84	075	3

0800  
L \_\_\_\_\_ BY \_\_\_\_\_  
λ \_\_\_\_\_ BY \_\_\_\_\_

1200  
L \_\_\_\_\_ BY \_\_\_\_\_  
λ \_\_\_\_\_ BY \_\_\_\_\_

2000  
L \_\_\_\_\_ BY \_\_\_\_\_  
λ \_\_\_\_\_ BY \_\_\_\_\_

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA

FROM \_\_\_\_\_ (ZT) \_\_\_\_\_ (Date)  
TO \_\_\_\_\_ (ZT) \_\_\_\_\_ (Date)

SET \_\_\_\_\_  
DRIFT \_\_\_\_\_

POSITION BETWEEN FIXES

MID. L \_\_\_\_\_  
MID. λ \_\_\_\_\_

MILES STEAMED  
0000-2400

FUEL CONSUMED  
0000-2400

## REMARKS

EXAMINED:

U.S.N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_

(Day) (Date) (Month) , 19\_\_\_\_

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



DECK LOG SHEET - TYPE B

USS Geo. Eastman (YAG-39) ZONE DESCRIPTION +10W DATE MONDAY 9 NOVEMBER 19 64  
AT/PASSAGE FROM OP AREA TO OP AREA

WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI-BIL-ITY (Miles)	WEATH-ER (Sym-bols)	BAROM-ETER (Inches)	TEMPER-ATURE		CLOUDS			SEA WATER TEMPER-ATURE	WAVES	
	DIREC-TION (True)	SPEED (knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIREC-TION (True)	HEIGHT (Feet)
01	075	20	10	SCT	2985	78	75	243	2000	CU	84	070	3
02	075	20	10	SCT	2983	78	74	3	2000	CU	84	075	3
03	091	23	10	SCT	2982	77	74	3	2000	CU	85	075	3
04	090	23	10	SCT	2982	77	73	3	2000	CU	85	080	3
05	090	23	10	SCT	2981	77	73	3	2000	CU	85	080	3
06	090	23	10	SCT	2981	77	73	3	2000	CU	85	080	3
07	090	23	10	SCT	2981	77	73	3	2000	CU	85	080	3
08	090	15	12	SCT	2981	77	74	3	2000	CU	85	090	3
09	090	15	12	SCT	2982	77	74	3	2000	CU	85	090	3
10	090	15	12	SCT	2983	77	76	3	2000	CU	85	090	3
11	090	15	12	SCT	2984	80	76	3	2000	CU	85	090	3
12	105	21	10	BKN	2984	85	76	9	2000	CU	85	090	5
13	100	19	10	BKN	2984	85	76	7	2000	CU	85	090	4
14	093	15	10	BKN	2979	83	77	7	2000	CU	85	090	4
15	084	17	10	BKN	2977	84	77	7	2000	CU	85	080	5
16	119	14	10	SCT	2976	81	75	5	2000	CU	87	085	3
17	079	18	10	SCT	2976	81	76	5	2000	CU	87	075	3
18	080	18	10	SCT	2978	81	76	5	2000	CU	87	075	3
19	080	18	10	SCT	2981	81	76	5	2000	CU	87	075	3
20	080	15	10	SCT	2981	81	78	4	2000	CU	86	080	3
21	080	15	10	SCT	2982	80	78	4	2000	CU	86	080	4
22	080	15	10	SCT	2984	81	76	4	2000	CU	86	080	4
23	080	15	10	SCT	2984	78	75	4	2000	CU	86	080	4
24	115	20	10	SCT	2984	81	76	4	2000	CU	86	090	6

POSITION	ZONE	TIME
0800		
L	BY	
λ	BY	
1200		
L	BY	
λ	BY	
2000		
L	BY	
λ	BY	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM	(Date)
TO	(Date)
SET	
DRIFT	
POSITION BETWEEN FIXES	
MID. L	
MID. λ	

MILES STEAMED 0000-2400
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FUEL CONSUMED 0000-2400
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REMARKS

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_ (Day) (Date) (Month) , 19\_\_\_\_

[Lined area for additional remarks]

APPROVED:

EXAMINED:

\_\_\_\_ U.S.N. COMMANDING \_\_\_\_\_ U.S.N. NAVIGATOR



## DECK LOG-WEATHER OBSERVATION SHEET

USS \_\_\_\_\_ ZONE DESCRIPTION \_\_\_\_\_ DATE 1455. 10 Nov. 1964

AT/PASSAGE FROM \_\_\_\_\_ TO \_\_\_\_\_

TABLE I

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BARO- METER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER	WAVES	
	DIREC- TION (True)	FORCE (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type	TEMPER- ATURE	DIREC- TION (True)	HEIGHT (Feet)
01	110	22	10	SC	29.84	81	76	4	5000	CU	85	090	5
02	107	32	10	SC	29.83	80	76	3	5000	CU	85	090	5
03	111	20	10	CLR	29.82	80	75	1	5000	CU	86	090	4
04	113	19	10	CLR	29.80	79	75	1	5000	CU	86	090	4
05	015	20	10	CLR	29.78	78	75	1	2000	CU	86	085	4
06	092	25	10	SC	29.78	78	75	2	2000	CU	86	085	4
07	053	25	10	SC	29.81	77	74	4	2000	CU	86	080	4
08	105	8	10	SC	29.82	77	74	5	2000	CU	86	080	4
09	105	9	10	SC	29.83	77	74	5	2000	CU	86	080	4
10	105	7	10	BKN	29.85	77	75	7	2000	CU	85	080	4
11	100	9	10	BKN	29.86	78	75	7	1700	CU	85	080	4
12	080	18	10	BKN	29.84	78	75	8	1700	CU	85	080	4
13	080	25	10	BKN	29.82	78	75	8	1700	CU	85	080	4
14	080	33	10	BKN	29.79	81	75	8	1700	CU	85	080	4
15	080	36	10	R	29.79	81	75	8	1800	CU	85	080	4
16	085	27	8	R	29.80	80	75	10	1200	ST	83	075	3
17	095	27	8	R	29.81	78	78	10	1500	ST	84	090	3
18	090	30	8	BKN	29.81	76	74	9	1500	ST	84	095	3
19	095	25	8	BKN	29.82	76	74	9	1500	ST	84	090	3
20	085	17	10	BKN	29.84	76	72	7	2000	CU	84	090	3
21	085	18	10	SC	29.85	76	73	5	2000	ST/CU	84	090	3
22	085	17	10	SC	29.86	76	73	4	2000	ST/CU	84	090	3
23	085	17	10	SC	29.87	76	73	4	2000	ST/CU	84	090	3
24	085	15	10	SC	29.85	79	75	4	2000	ST/CU	84	090	3

POSITION	ZONE	TIME
0800		
L _____	BY _____	
$\lambda$ _____	BY _____	
1200		
L _____	BY _____	
$\lambda$ _____	BY _____	
2000		
L _____	BY _____	
$\lambda$ _____	BY _____	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM _____	_____
(ZT)	(Date)
TO _____	_____
(ZT)	(Date)
SET _____	_____
DRIFT _____	_____
POSITION BETWEEN FIXES	
MID. L _____	_____
MID. $\lambda$ _____	_____

CURRENT DATA	
FROM	_____
	(ZT) _____ (Date) _____
TO	_____
	(ZT) _____ (Date) _____
SET	_____
DRIFT	_____
POSITION BETWEEN FIXES	
MID. L	_____
MID. $\lambda$	_____

TABLE II  
SYNOPTIC OBSERVATIONS[illegible]

CURRENT DATA	
FROM _____	( <i>ZT</i> ) (Date)
TO _____	( <i>ZT</i> ) (Date)
SET _____	
DRIFT _____	
POSITION BETWEEN FIXES	
MID. L. _____	
MID. $\lambda$ _____	

Course of Ship (0-9)	Speed of Ship (0-9)	3-HOUR PRESSURE TENDENCY		SIGNIFICANT CLOUD				Indicator	Diff Sea Air  ° F	Dew Point  ° F	WAVES				WAVES				ICE				
		Characteristic (0-9)	Amount Change (mt and tenths)	Indicator	Amount (Eighths)	Type	Height				Indicator	Direction (00-36)	Period	Height	Indicator	Direction (00-36)	Period	HEIGHT	Kind	Effect	Bearing	Distance	Orientation
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
D <sub>s</sub>	v <sub>s</sub>	a	pp	8	N <sub>s</sub>	C	h <sub>s</sub> h <sub>s</sub>	0	T <sub>s</sub> T <sub>s</sub>	T <sub>d</sub> T <sub>d</sub>	1	d <sub>w</sub> d <sub>w</sub>	P <sub>w</sub>	H <sub>w</sub>	1	d <sub>w</sub> d <sub>w</sub>	P <sub>w</sub>	H <sub>w</sub>	c <sub>2</sub>	K	D <sub>i</sub>	r	e
				8				0			1				1								
				8				0			1				1								
				8				0			1				1								
				8				0			1				1								
				8				0			1				1								

MILES STEAMED  
 0000-2400

FUEL CONSUMED  
0000-2400

EXAMINED



## DECK LOG SHEET - TYPE B

USS \_\_\_\_\_ ZONE DESCRIPTION \_\_\_\_\_ DATE WED 11 Nov 64  
(Day) (Date) (Month)

AT/PASSAGE FROM \_\_\_\_\_ TO \_\_\_\_\_

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (knots)				Dry bulb	wet bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (Feet)
01	080	15	10	BKN	2985	78	74	6	1800	ST/CU	85	090	5
02	080	15	10	BKN	2984	78	74	6	1800	ST/CU	85	080	5
03	080	12	10	BKN	2984	79	74	6	1800	CU	85	080	5
04	071	17	10	SC	2983	80	75	2	3000	CU	85	070	3
05	068	15	10	SC	2981	81	76	3	3000	CU	84	070	4
06	073	18	10	SC	2980	79	75	3	3000	CU	84	070	4
07	082	18	10	SC	2981	81	75	5	2000	CU	85	075	3
08	070	15	8	BKN	2982	79	73	6	2000	CU	84	085	3
09	075	25	8	BKN	2984	77	74	8	2000	CU	84	080	3
10	090	25	10	BKN	2985	77	73	6	2000	CU	84	085	3
11	090	25	10	SC	2984	79	75	5	1500	CU	84	090	5
12	090	19	10	SC	2982	80	77	5	2000	CU	84	090	5
13	090	18	10	SC	2981	80	76	6	2000	CU	84	090	5
14	090	16	10	BKN	2980	81	78	7	2000	CU	84	090	5
15	090	17	10	BKN	2978	81	78	8	2000	CU	84	090	4
16	110	14	10	BKN	2978	79	76	8	1800	CU	84	090	4
17	096	30	10	BKN	2976	81	76	8	3000	CU	84	100	3
18	110	18	10	BKN	2977	80	77	9	5000	CU	85	120	3
19	076	22	10	BKN	2978	81	77	9	3000	CU	85	120	3
20	080	27	8	BKN	2978	77	75	9	2000	CU	85	100	4
21	142	19	8	BKN	2979	77	75	9	2000	CU	85	160	4
22	100	20	8	OVC	2981	77	76	10	2000	ST	85	090	4
23	105	21	8	OVC	2981	77	75	10	2000	ST	85	095	4
24	125	33	10	OVC	2978	79	76	10	1500	ST/CU	84	120	9

POSITION	ZONE	TIME
0800		
L _____	BY _____	
λ _____	BY _____	
1200		
L _____	BY _____	
λ _____	BY _____	
2000		
L _____	BY _____	
λ _____	BY _____	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM _____	(Date)
TO _____	(Date)
SET _____	
DRIFT _____	
POSITION BETWEEN FIXES	
MID. L _____	
MID. λ _____	

MILES STEAMED  
0000-2400FUEL CONSUMED  
0000-2400

## REMARKS

APPROVED:

EXAMINED:

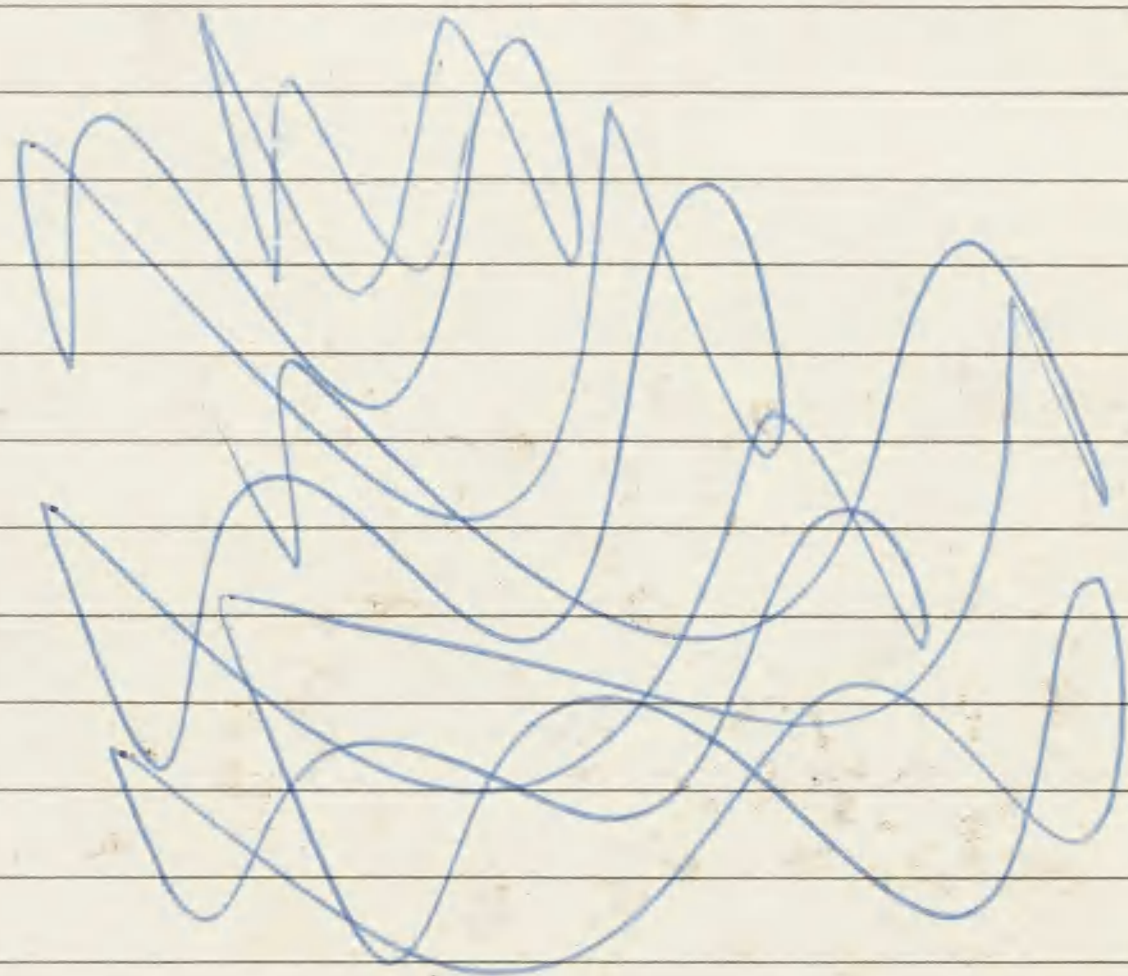
U.S.N. COMMANDING

U.S.N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_ (Day) (Date) (Month) , 19\_\_\_\_



APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



DECK LOG SHEET - TYPE B

USS \_\_\_\_\_ ZONE DESCRIPTION \_\_\_\_\_ DATE THURSDAY 12 NOV , 19 64  
(Day) (Date) (Month)

AT/PASSAGE FROM \_\_\_\_\_ TO \_\_\_\_\_

WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (Feet)
01	125	33	10	OK	2977	79	76	10	1500	ST/CA	84	120	9
02	125	38	10	RA	2975	79	76	10	1500	ST/CA	84	120	9
03	125	37	10 <sup>3</sup>	RA	2976	79	76	10	1500	ST/CA	84	120	9
04	120	35	10 <sup>3</sup>	RA	2975	76	74	10	1500	ST/CA	84	120	9
05	120	27	10	RA	2974	77	76	8	1500	ST/CA	84	120	8
06	120	27	8	RA	2973	77	75	8	1400	ST/CA	84	120	8
07	120	25	8	RA	2976	79	75	8	1600	ST/CA	84	120	8
08	120	20	8	OK	2978	80	76	10	2000	ST	85	110	5
09	120	21	10	OK	2980	80	75	10	5000	ST	85	110	5
10	120	25	10	OK	2982	81	77	10	2000	ST	84	100	6
11	122	23	10	OK	2983	81	77	10	3000	ST	84	100	5
12	085	22	8	OK	2982	77	76	10	2000	ST	83	090	5
13	107	14	8	OK	2981	78	75	10	2000	ST/CA	83	090	5
14	065	19	8	OK	2978	80	78	10	2000	ST/CA	84	090	5
15	080	17	8	RA	2977	79	77	9	2000	ST	83	085	5
16	080	17	8	RA	2977	79	77	9	2000	ST/CA	83	085	5
17	050	18	10	RA	2978	84	80	8	2000	ST/CA	85	060	5
18	050	18	10	RA	2981	89	77	8	2000	ST/CA	85	060	5
19	050	18	8	OK	2983	81	77	10	2000	ST/CA	85	080	6
20	080	30	7	R	2984	79	74	10	1000	ST	83	080	6
21	075	30	10	OK	2985	80	76	10	3000	ST	84	085	5
22	079	38	8	OK	2985	80	75	10	1500	ST	84	080	5
23	082	35	8	OK	2986	81	74	10	1500	ST	83	080	6
24	136	12	8	OK	2987	79	75	10	1500	ST	86	136	6

POSITION	ZONE	TIME
0800		
L _____	BY _____	
λ _____	BY _____	
1200		
L _____	BY _____	
λ _____	BY _____	
2000		
L _____	BY _____	
λ _____	BY _____	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM _____	(Date)
(ZT)	
TO _____	(Date)
(ZT)	
SET _____	
DRIFT _____	
POSITION BETWEEN FIXES	
MID. L _____	
MID. λ _____	

MILES STEAMED 0000-2400

FUEL CONSUMED 0000-2400

REMARKS

1735



### ADDITIONAL REMARKS

UNITED STATES SHIP

(Day) (Date) (Month), 19

1.4

$$f \sim -E$$

169 W

$$\begin{array}{r} 20 \quad 1721 \\ 10 \quad 1735 - 14 = 7 \end{array}$$
$$\begin{array}{r} 0 \\ 3 \\ 16 \\ 10 \end{array} \bigg| \begin{array}{r} 0 \\ 3 \\ 6 \\ 6.5 \\ 1.4 \\ 26 \\ 65 \\ 9.1 \end{array}$$
$$\begin{array}{r} 1735 \\ 1726 \\ 116 \\ \hline 1842 \end{array}$$

Handwritten scribbles and symbols on lined paper.

172 10W2

1655 NL

$$\begin{array}{r} 169 \\ 150 \\ \hline 19 \\ 4 \\ \hline 76 \end{array}$$

Handwritten notes on lined paper, possibly a calendar or list, with various scribbles and markings. The text is mostly illegible due to the handwriting and scribbles.

1, 2, 2

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



### ZONE DESCRIPTION

DATE \_\_\_\_\_

FRIDAY 13 NOVEMBER, 1964  
(Day) (Date) (Month)

AT/PASSAGE FROM

TO

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (Feet)
01	103	13	8	BKN	2987	78	75	9	2000	STCU	85	125	5
02	088	15	8	OVC	2983	78	75	10	2000	STCU	85	088	4
03	088	15	8	R	2985	77	74	10	2000	ST	84	088	4
04	090	14	8	OVC	2986	77	74	10	1500	STCU	84	090	4
05	090	16	8	OVC	2986	77	74	10	1500	STCU	84	090	4
06	090	13	8	OVC	2986	78	74	10	1500	STCU	84	090	4
07	090	13	8	OVC	2986	78	74	9	1600	STCU	84	090	4
08	090	31	10	BKN	2988	80	76	8	1600	STCU	84	090	4
09	085	10	10	BKN	2989	78	75	8	1600	STCU	84	090	4
10	085	20	10	BKN	2991	78	74	8	1600	STCU	84	090	4
11	085	20	10	BKN	2991	78	74	8	1600	STCU	84	090	4
12	080	25	10	BKN	2990	81	76	9	2000	CU	83	090	6
13	056	18	10	BKN	2988	82	77	8	2000	CU	83	090	6
14	055	19	10	BKN	2988	82	76	7	2000	CU	84	090	5
15	050	50	10	BKN	2993	81	76	10	2000	CU	85	090	5
16	088	10	20	BKN	2982	80	76	6	2000	CU	85	090	4
17	080	15	20	BKN	2982	80	76	6	2000	CU	83	090	4
18	088	15	20	BKN	2982	80	76	6	2000	CU	83	090	3
19	050	13	10	BKN	2985	78	74	7	2000	CU	83	050	3
20	099	18	10	BKN	2987	79	75	7	1800	CU	83	090	3
21	099	18	10	BKN	2988	78	74	7	1800	CU	85	090	4
22	099	18	10	BKN	2990	78	74	6	1800	CU	85	090	4
23	077	18	10	BKN	2991	78	74	6	1800	CU	85	090	4
24	075	21	10	SC	2990	79	75	4	2000	SC	85	090	5

POSITION	ZONE	TIME
0800		
L _____	BY _____	
λ _____	BY _____	*
1200		
L _____	BY _____	
λ _____	BY _____	
2000		
L _____	BY _____	
λ _____	BY _____	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. B.

## CURRENT DATA

FROM \_\_\_\_\_ (ZT) \_\_\_\_\_ (Date)  
TO \_\_\_\_\_ (ZT) \_\_\_\_\_ (Date)

SET \_\_\_\_\_

DRIFT \_\_\_\_\_

## POSITION BETWEEN FIXES

MID. L \_\_\_\_\_

MID.  $\lambda$  \_\_\_\_\_

MILES STEAMED  
0000-2400

FUEL CONSUMED  
0000-2400

APPROVED:

EXAMINED:

U. S. N. COMMANDING

U.S.N. NAVIGATOR



NAVPER 720 (Rev. 4-56)

### ADDITIONAL REMARKS

UNITED STATES SHIP

(Day) (Date) (Month), 19

APPROVED:

EXAMINED:

U. S. N. COMMANDING

U.S.N. NAVIGATOR

TO BE FORWARDED TO THE BUREAU OF NAVAL PERSONNEL AT THE END OF EACH MONTH



## DECK LOG SHEET - TYPE B

USS

### ZONE DESCRIPTION

DATE \_\_\_\_\_

( Day ).

(Date)

( Month )

19

AT/PASSAGE FROM

TO

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (Knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (Feet)
01	080	27	10	Sct	2990	81	77	4	4000	sc	84	120	5
02	075	22	10	Sct	2989	82	76	2	4000	sc	84	120	5
03	077	25	10	Sct	2989	81	75	2	2000	cu	84	120	4
04	092	21	10	SCT	2988	79	74	2	2000	CU	84	090	3
05	092	21	10	SCT	2990	78	74	2	2000	CU	84	095	3
06	092	23	10	SCT	2989	77	74	2	2000	CU	84	090	3
07	090	20	15	SCT	2991	78	75	2	2000	CU	84	090	3
08	090	17	12	Sct	2992	79	76	2	2000	CU	84	090	3
09	090	16	12	Sct	2993	79	76	3	2000	CU	84	090	3
10	090	16	12	SCT	2994	79	75	4	2000	CU	84	090	3
11	061	15	10	SCT	2994	80	75	5	1800	ST	85	080	3
12	061	15	10	SCT	2993	82	74	5	1800	ST	85	080	3
13	061	15	10	SCT	2991	82	74	5	1800	ST	85	080	3
14	061	15	10	SCT	2990	82	74	5	1800	ST	85	080	3
15	061	15	10	SCT	2988	82	74	5	1800	ST	85	080	3
16	060	20	10	SCT	2988	81	75	5	3000	CU	82	080	4
17	086	16	15	SCT	2989	77	73	5	2000	CU	84	080	3
18	062	22	15	SCT	2990	77	72	4	2000	CU	84	075	2
19	055	20	10	Sct	2992	78	72	3	2000	CU	84	075	3
20	052	14	10	Sct	2993	77	73	3	2000	CU	84	075	3
21	037	12	10	Sct	2994	79	73	4	3000	CU	85	075	3
22	036	13	10	Sct	2995	79	74	4	3000	CU	85	080	3
23	030	18	10	Sct	2995	79	74	4	3000	CU	85	080	3
24	040	12	10	SCT	2993	79	74	4	2000	CU	85	080	3

POSITION	ZONE	TIME
0800		
L _____	HY _____	
λ _____	BY _____	
1200		
L _____	BY _____	
λ _____	BY _____	
2000		
L _____	BY _____	
λ _____	BY _____	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM _____	
(ZT) _____	(Date) _____
TO _____	
(ZT) _____	(Date) _____
SET _____	
DRIFF _____	
POSITION BETWEEN FIXES	
MID. L _____	
MID. $\lambda$ _____	

MILES STEAMED	0000-2400

FUEL CONSUMED
0000-2400

## REMARKS

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_

(Day) (Date) (Month) 19\_\_

50  
10/507  
50  
7

1/3  
06  
8 67  
0'2 051 8'8  
19

81  
87  
17

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



$N \quad N \quad N \quad N \quad N \quad N$

USS

### ZONE DESCRIPTION

DATE \_\_\_\_\_

5/11/21  
(Day)

15  
(Date)

20  
(Month)

19

AT/PASSAGE FROM

TO

ND	VIS- BIL- ITY	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)
SPEED (knots)	(Miles)		

POSITION	ZONE	TIME
0800		
L <u>18 52.0N</u>		BY <u>2, 4</u>
<u>λ 164 25.0W</u>		BY <u>3, 4</u>
1200		
L _____		BY _____
<u>λ _____</u>		BY _____
2000		
L _____		BY _____
<u>λ _____</u>		BY _____

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM	_____
	(ZT) (Date)
TO	_____
	(ZT) (Date)
SET	_____
DRIFT	_____
POSITION BETWEEN FIXES	
MID. L	_____
MID. $\lambda$	_____

MILES STEAMED  
0000-2400

FUEL CONSUMED  
0000-2400

## REMARKS

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_ (Day) (Date) (Month) , 19\_\_

2 = 84-3 84-3  
3 = 42-2 = 21-1  
4 = 42-4 = 21-2  
5 = 42-4 = 21-2  
6 = 42-6 = 21-3  
7 = 42-6 = 21-3  
8 = 42-6 = 21-3  
9 = 42-4 = 21-2  
10 = 42-4 = 21-2  
11 = 42-2 = 21-1  
12 = 84-3 = 84-3

1ST ROLE  
START (2)(3)(12) 42-5 CRAPS 3-1  
OVER (7)(11) 21-4  
2ND (4)(5)(9)(10) 21-8 7-6 3-2  
RACE (6)(8) 7-2

2ND ROLE

6-6  
6-5  
6-4  
6-3  
6-2  
6-1  
5-5  
5-4  
5-3  
4-2  
4-1  
3-1  
2-1  
1-1



## DECK LOG SHEET - TYPE B

USS Tell B to GPT 500 ZONE DESCRIPTION MON 16 NOV 64 DATE MON 16 NOV 64  
AT/PASSAGE FROM \_\_\_\_\_ TO \_\_\_\_\_

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (Feet)
01	055	12	10	SET	2990	77	72	4	2000	CU	83	060	4
02	055	14	10	SET	2989	77	73	5	2000	CU	83	060	3
03	060	15	10	SET	2987	77	73	5	2000	CU	83	060	3
04	060	15	10	SET	2987	76	72	5	2000	CU	84	070	4
05	060	15	10	SET	2986	75	71	5	2000	CU	84	070	4
06	066	15	10	SET	2987	74	71	5	2000	CU	84	070	4
07	060	12	10	SET	2988	73	70	5	2000	CU	84	070	4
08	047	10	10	SET	2990	74	72	3	3000	CU	85	040	2
09	052	12	10	SET	2992	74	73	3	3000	CU	85	040	3
10	055	10	10	SET	2992	80	73	2	2000	CU	85	040	3
11	050	6	10	SET	2992	80	74	2	5000	CU	84	040	2
12	357	13	15	SET	2988	80	74	2	2000	CU	83	045	2
13	000	13	15	SET	2987	77	71	5	2000	CU	83	020	2
14	066	13	15	SET	2986	78	71	4	2000	CU	84	020	2
15	066	15	15	BKN	2986	80	73	7	2000	CU	84	020	2
16	067	14	12	BKN	2988	79	73	7	1800	CU	83	020	2
17	068	14	10	BKN	2988	77	72	7	1800	CU	83	020	2
18	068	14	10	BKN	2988	75	71	7	1800	CU	84	020	2
19	068	12	10	BKN	2990	74	71	7	1800	CU	84	020	2
20	075	9	10	BKN	2992	76	72	6	2000	CU	84	020	3
21	068	10	10	BKN	2993	78	75	7	2000	CU	84	020	3
22	053	9	10	BKN	2994	80	75	7	2000	CU	83	020	3
23	059	10	10	BKN	2995	80	75	8	2000	CU	83	020	3
24	060	4	10	BKN	2994	78	75	7	2000	CU	84	070	3

POSITION	ZONE	TIME
0800		
L _____	BY _____	
λ _____	BY _____	
1200		
L _____	BY _____	
λ _____	BY _____	
2000		
L _____	BY _____	
λ _____	BY _____	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. R.

CURRENT DATA	
FROM _____	(Date)
TO _____	(Date)
SET _____	
DRIFT _____	
POSITION BETWEEN FIXES	
MID. L _____	
MID. λ _____	

MILES STEAMED  
0000-2400

FUEL CONSUMED  
0000-2400

## REMARKS

FOR ~~Daily~~ Hourly weather RE  
FOR Hourly weather RETURN  
Fleet Weather Center Pearl  
VAC-39 is  
While at Port, Pearl Harbor, Hawaii  
RETURN to  
ALT WEA CAN Pearl For Hourly Weather Reports.

APPROVED:

EXAMINED:

U.S.N. COMMANDING

U.S.N. NAVIGATOR



ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_ (Day) (Date) (Month) , 19\_\_\_\_

13  
8/109  
9  
24  
3

APPROVED:

EXAMINED:

\_\_\_\_ U.S.N. COMMANDING \_\_\_\_\_ U.S.N. NAVIGATOR



## DECK LOG SHEET - TYPE B

USS \_\_\_\_\_ ZONE DESCRIPTION \_\_\_\_\_ DATE Tuesday 17 Nov, 19 64  
(Day) (Date) (Month)

AT/PASSAGE FROM \_\_\_\_\_ TO \_\_\_\_\_

## WEATHER OBSERVATIONS

ZONE TIME	WIND		VISI- BIL- ITY (Miles)	WEATH- ER (Sym- bols)	BAROM- ETER (Inches)	TEMPER- ATURE		CLOUDS			SEA WATER TEMPER- ATURE	WAVES	
	DIREC- TION (True)	SPEED (knots)				Dry Bulb	Wet Bulb	Amount (Tenths)	Height	Type		DIREC- TION (True)	HEIGHT (feet)
01	060	4	18	BKN	2993	77	73	8	1800	ST/CL	83	060	2
02	070	4	18	BKN	2992	75	71	8	1800	ST/CL	83	065	2
03	070	4	18	BKN	2991	76	72	8	1800	ST/CL	83	065	2
04	070	6	20	SCT	2991	75	71	2	2000	CU	83	060	1
05	070	6	20	SCT	2990	74	70	2	2000	CU	82	060	1
06	055	10	20	SCT	2990	73	69	2	2000	CU	81	055	1
07	050	5	20	SCT	2993	74	70	2	2000	CU	80	035	1
08	065	5	15	SCT	2993	78	72	2	2000	CU	82	035	1
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													

POSITION	ZONE	TIME
0800		
L _____	BY _____	
1200		
L _____	BY _____	
2000		
L _____	BY _____	

LEGEND: 1 - CELESTIAL  
2 - ELECTRONIC  
3 - VISUAL  
4 - D. B.

CURRENT DATA	
FROM _____	(ZT) _____ (Date) _____
TO _____	(ZT) _____ (Date) _____
SET _____	
DRIFT _____	
POSITION BETWEEN FIXES	
MID. L _____	
MID. A _____	

MILES STEAMED  
0000-2400FUEL CONSUMED  
0000-2400

## REMARKS



FOR OFFICIAL USE ONLY

NAVPER 720 (Rev. 4-56)

## ADDITIONAL REMARKS

UNITED STATES SHIP \_\_\_\_\_

(Day)

(Date)

(Month)

, 19\_\_\_\_



DATE Mar 2 Nov. 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100																
0200																
0300																
0400																
0500																
0600																
0700																
0800																
0900																
1000	10	158-01														
1100	12	158-01														
1200	21-06N	158-03W	Sct	10	10	79	78	96	3			060 2	84	4	080	309° / 10 KTS
1300	21-00N	158-09W	Sct	10	10	80	77	91	3			060 2	84	6	100	390° / 10 KTS
1400	21-00N	158-18W	Sct	10	10	81	76	87	2			060 2	84	6	100	370° / 10 KTS
1500	20-58N	158-27W	Sct	10	10	80	77	91	2			060 3	84	7	080	347° / 10 KTS
1600	20-55N	158-34W	Sct	10	10	80	77	91	2			065 3	84	4	080	347° / 10 KTS
1700	20-52N	158-43W	Sct	10	10	81	72	75	3			065 3	83	5	067	347° / 10 KTS
1800	20-48N	158-50W	Sct	10	10	78	74	87	3			065 3	83	5	068	247° / 10 KTS
1900	20-45N	159-01W	Sct	10	10	78	66	67	3			060 2	83	3	067	347° / 10 KTS
2000	20-41.5N	159-10.5W	Sct	10	10	77	66	67	3			060 2	83	5	067	247° / 10 KTS
2100	20 39N	159-17W	Sct	10	10	76	67	71	3			065 3	83	4	061	247° / 10 KTS
2200	20 35N	159-23W	Sct	10	10	75	66	70	2			065 3	83	4	064	247° / 10 KTS
2300	20 32N	159-31W	Sct	10	10	75	66	74	3			065 3	83	4	065	246° / 10 KTS
2400	20 30N	159-40W	Sct	10	10	76	73	91	3			065 3	84	8	065	246° / 10 KTS

REMARKS:  
2400 30-34N

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE TUES 3 NOV 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID/O	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	20-26N	159-46W	ScT	10	10	76			2		015 3	83	8	065	346
0200	20-23N	159-55W	ScT	10	10	76			2		010 3	83	8	065	346
0300	20-19N	160-03N	ScT	10	10	77			2		010 3	80	6	070	346
0400	20-16N	160-12N	ScT	10	10	79			3		010 3	79	4	073	346
0500	20-13N	160-21N	ScT	10	10	79			3		010 3	80	7	068	346
0600	20-10N	160-29N	ScT	10	10	78			4		010 3	79	7	090	346
0700	20-08N	160-38N	ScT	10	10	78			4		015 3	79	5	090	346
0800	19-59.0N	160-5.2W	ScT	10	10	76			5		015 3	84	3	090	247 / 10 KTS
0900	19-53N	161-07W	ScT	10	10	77			5		010 3	79	10	089	247
1000	19-52N	161-12W	ScT	10	10	77			5		015 3	79	15	090	247
1100	19-50N	161-16W	ScT	10	10	77			5		015 3	79	15	055	247
1200	19-48.5N	161-19.0W	ScT	10	10	79			5		010 3	81	15	055	247 / 10 KTS
1300	19-45N	161-28W	ScT	10	10	82			5		010 3	82	9	060	247
1400	19-41N	161-37W	ScT	10	10	85			5		010 2	82	6	065	247
1500	19-38N	161-45W	ScT	10	10	86			5		010 2	82	4	070	247
1600	19-34N	161-53W	ScT	10	10	86			5		010 4	84	6	070	247
1700	19-30N	162-04W	ScT	10	10	85			5		010 4	83	6	070	247
1800	19-25N	162-13W	ScT	10	10	80			5		010 4	82	19	070	247
1900	19-21N	162-23W	ScT	10	10	80			5		010 4	84	50	070	247
2000	19-17.5N	162-32.2W	ScT	10	10	77			4		010 3	84	10	040	247 / 10 KTS
2100	19-14N	162-41W	ScT	10	10	78			4		010 3	84	10	035	247
2200	19-10N	162-50W	ScT	10	10	77			4		015 3	84	10	030	247
2300	19-06N	162-59W	ScT	10	10	77			4		010 3	84	15	040	247
2400	19-03N	163-09W	ScT	10	10	76			4		010 3	84	13	040	247

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE WED. 4 NOV. 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	18-59N	163-17W	Sct	10	10	76			3		080 2	84	10	050	248
0200	18-55N	163-27W	↑	↑	10	76			3		080 2	↑	9	050	348
0300	18-52N	163-36W	↑	↑	10	77			3		080 4	↑	8	060	348
0400	18-48N	163-45W			12	76			3		080 4		8	060	348
0500	18-45N	163-54W			12	77			3		080 4		8	070	348
0600	18-40N	164-04W			12	76			3		080 3		10	070	348
0700	18-36N	164-14W			10	76			3		120 4		21	101	348
0800	18-32N	164-23W			12	76			3		120 3		20	095	348 / 10 KTS
0900	18-29N	164-35W			12	76			4		120 3		18	098	348
1000	18-25N	164-44W	↓		12	77			4		130 4		15	100	348
1100	18-22N	164-55W	Sct		12	79			5		130 4	↓	16	100	348
1200	18-18N	165-05W	GRN		12	82			6		070 3	84	20	102	349 / 10 KTS
1300	18-15N	165-10W	Sct		10	84			4		070 3	85	14	103	349
1400	18-11N	165-23W	Sct		12	83			4		070 3	↑	10	103	349
1500	18-08N	165-32W	Sct		10	83			4		095 3		10	102	349
1600	18-05N	165-41W	Sct		10	83			4		090 3		10	105	349
1700	18-03N	165-51W	GRN		10	83			6		090 3		10	110	349
1800	17-59	166-00W	GRN		10	81			6		100 2		10	110	349
1900	17-58	166-10W	Sct		10	80			5		110 2		8	100	349
2000	17-53.8N	166-19.5W	Sct		10	80			5		100 3		10	100	349 / 10 KTS
2100	17-51N	166-58W	GRN		12	79			6		100 3		14	100	349
2200	17-47N	166-37W	Sct		10	78			3		100 3	↓	11	093	348
2300	17-44N	166-46W	Sct	↓	10	77			3		095 3	85	20	090	348
2400	17-50N	166-56W	Sct	10	10	77			3		095 3	86	20	091	348

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
 WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
 12-5-63



DATE THurs 5 Nov 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17-37N	167-05W	SCT		10	10	78			3		090 3	85	24	090	248
0200	17-33N	167-13W	A			10	77			4		090 3		24	090	248
0300	17-30N	167-22W	A			10	77			4		090 3		26	090	248
0400	17-27N	167-31W	A			10	77			4		090 3		18	090	248
0500	17-23N	167-40W	V			10	77			4		090 3		16	080	248
0600	17-20N	167-49W	SCT			10	77			4		090 3		16	080	248
0700	17-14N	168-01W	Wm			10	78			4		090 3		10	080	248
0800	17-11N	168-09W	A			10	78			8		090 3		10	080	248 / 10KTS
0900	17-08N	168-19W	A			10	78			8		090 3		11	090	248
1000	17-04N	168-29W	A			10	78			8		090 3		11	100	248
1100	16-59N	168-38W	A			10	81			8		100 5		10	110	248
1200	16-56N	168-45W	A			10	79			7		100 5		18	104	248 / 10KTS
1300	16-52N	168-54W	A			10	79			7		110 3		30	080	248
1400	16-47N	169-04W	A			10	79			9		110 3		20	085	248
1500	16-43N	169-12W	A			10	81			7		090 3		20	103	248
1600	16-39N	169-19W	A			10	81			7		100 3		14	110	248
1700	16-33N	169-21W	A			10	80			7		100 3	85	14	105	166
1800	16-25N	169-19W	A			10	80			7		105 3	84	12	105	166
1900	16-18N	169-18W	A			10	78			7		105 3	84	14	105	166
2000	16-09N	169-16W	A			10	79			8		105 3	84	14	105	169 / 10KTS
2100	15-59N	169-15W	A			10	79			8		105 4	85	14	105	164
2200	15-50N	169-12W	A			10	79			8		103 4	85	14	105	164
2300	15-40N	169-10W	BKN			10	78			8		105 4	85	14	105	164
2400	15-39N	169-07W	SCT		10	10	79			4		100 3	85	25	060	164

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE Fri. 6 Nov. 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	13-19 N	169-05 W	0102		10	10	77			3		100 3	85	22	070	164
0200	13-10 N	169-04 W	0102			10	77			3		110 3	85	24	060	164
0300	13-01 N	169-03 W	0102		1	10	77			1		110 3	85	23	083	164
0400	12-51 N	169-03 W	0102			10	77			3		110 4	85	19	080	164
0500	12-44 N	169-03 W				10	76			3		115 5	85	19	070	164
0600	12-40 N	169-04 W				10	76			4		105 5	84	27	085	164
0700	12-35 N	169-05 W				10	76					105 5	84	30	085	164
0800	12-30 N	169-05.5 W				10	79					100 5	84	30	085	164
0900	12-23 N	169-09 W				10	81					100 4	84	18	090	205
1000	12-16 N	169-12 W				10	80					100 4	84	17	090	205
1100	12-08 N	169-16 W				10	80					100 4	84	17	090	205
1200	12-02 N	169-20 W				10	77					095 5	84	17	090	205
1300	13-53 N	169-25 W				10	80					095 5	85	14	090	205
1400	13-45 N	169-31 W				10	83					095 4		7	090	225
1500	13-40 N	169-38 W	0102			10	85					095 4		7	080	225
1600	13-35 N	169-44 W	0102			10	80			6		095 4		36	090	225
1700	13-29 N	169-49 W	0102			10	79			5		095 3		19	075	225
1800	13-24 N	169-55 W	0102			10	81			4		110 4		18	060	225
1900	13-20 N	170-02 W	0102			10	79			4		100 4		18	060	225
2000	13-17.5 N	170-06 W				10	78			4		100 4		18	070	225
2100	13-11 N	170-13 W				10	79			4		100 4		17	080	225
2200	13-04 N	170-20 W				10	78			4		085 3		20	070	225
2300	12-58 N	170-27 W				10	76			3		085 3		19	070	225
2400	12-52 N	170-34 W	0102		10	10	76			4		095 3	85	17	070	225

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE Lat. 7 Nov 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	12-42N	170-42W														
0200	12-38N	170-50W														
0300	12-32N	170-58W														
0400	12-35N	171-06W														
0500	12-18N	171-18W														
0600	12-12N	171-31W														
0700	12-05N	171-31W														
0800	12-07N	171-36W														
0900	12-17N	171-35W														
1000	12-27N	171-33W														
1100	12-35N	171-31W														
1200	12-42N	171-28W														
1300	12-46N	171-26W														
1400	12-50N	171-23W														
1500	12-55N	171-19W														
1600	12-59N	171-16W														
1700	13-05N	171-13W														
1800	13-11N	171-08W														
1900	13-18N	171-05W														
2000	13-22N	171-03W														
2100	13-27N	170-58W														
2200	13-32N	170-54W														
2300	13-38N	170-49W														
2400	13-41N	170-44W														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE Sund. 8 Nov. 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	13-48	170-40W														
0200	13-54	170-36W														
0300	13-59	170-31W														
0400	14-05	170-27W														
0500	14-10	170-22W														
0600	14-16	170-18W														
0700	14-21	170-13W														
0800	14-26	170-10W														
0900	14-30	170-03W														
1000	14-35	169-57W														
1100	14-40	169-53W														
1200	14-47	169-47.5W														
1300	14-52	169-44W														
1400	14-58	169-38W														
1500	15-03	169-33W														
1600	15-07	169-31W														
1700	15-11	169-37W														
1800	15-17	169-45W														
1900	15-22	169-51W														
2000	15-28.2	169-56W														
2100	15-35	170-03W														
2200	15-39	170-11W														
2300	15-22	170-18W														
2400	15-16	170-26W														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE Mon. 9 Nov. 1964

TIME	LAT <i>N</i>	LONG <i>W</i>	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	15-09	170-34														
0200	15-03	170-42														
0300	14-58	170-50														
0400	14-53	170-57														
0500	14-48	171-05														
0600	14-44	171-14														
0700	14-38	171-23														
0800	14-33	171-31														
0900	14-26	171-36														
1000	14-18	171-41														
1100	14-10	171-49														
1200	14-02	171-54.5														
1300	13-55	172-02														
1400	13-47	172-10														
1500	13-38	172-19														
1600	13-30	172-26														
1700	13-24	172-33														
1800	13-27	172-40														
1900	13-36	172-48														
2000	13-42	172-52.8														
2100	13-48	172-59														
2200	13-54	173-05														
2300	14-02N	173-00W														
2400	14-08	172-54														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE Tues. 10 Nov. 1964

TIME	LAT <i>N</i>	LONG <i>W</i>	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	14-14	172-49														
0200	14-19	172-43														
0300	14-26	172-39														
0400	14-33	172-34														
0500	14-39	172-39														
0600	14-45	172-33														
0700	14-52	172-19														
0800	14-56	172-17														
0900	15-01	172-10														
1000	15-06	172-03														
1100	15-10	171-57														
1200	15-16	171-52														
1300	15-50	171-46														
1400	15-35	171-40														
1500	15-30	171-38														
1600	15-34	171-29														
1700	15-39	171-24														
1800	15-44	171-19														
1900	15-49	171-14														
2000	15-56	171-10														
2100	16-01	171-04														
2200	16-05	170-59														
2300	16-11	170-52														
2400	16-17	170-43														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE Wed 11 Nov. 1964

TIME	LAT N	LONG W	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	16-36	170-53													
0200	16-32	171-03													
0300	16-40	171-12													
0400	16-38	171-57													
0500	16-34	171-38													
0600	16-39	171-49													
0700	16-23	171-59													
0800	16-52	172-01													
0900	16-15	172-08													
1000	16-08	172-14													
1100	16-01	172-20													
1200	15-57	172-23													
1300	15-49	172-31													
1400	15-40	172-38													
1500	15-32	172-46													
1600	15-23	172-53													
1700	15-14	173-00													
1800	15-07	173-10													
1900	14-59	173-21													
2000	14-52	173-28													
2100	14-44	173-36													
2200	14-41	173-44													
2300	14-50	173-55													
2400	14-58	174-06													

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE Tues. 12 Nov. 1964

TIME	LAT <u>N</u>	LONG <u>W</u>	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	<u>14-09</u>	<u>174-14</u>														
0200	<u>15-47</u>	<u>174-08</u>														
0300	<u>15-36</u>	<u>173-55</u>														
0400	<u>15-35</u>	<u>173-45</u>														
0500	<u>15-45</u>	<u>173-35</u>														
0600	<u>15-54</u>	<u>173-35</u>														
0700	<u>16-03</u>	<u>173-15</u>														
0800	<u>16-08</u>	<u>173-09</u>														
0900	<u>16-08</u>	<u>173-15</u>														
1000	<u>16-14</u>	<u>173-08</u>														
1100	<u>16-18</u>	<u>173-03</u>														
1200	<u>16-33</u>	<u>172-57</u>														
1300	<u>16-39</u>	<u>172-50</u>														
1400	<u>16-37</u>	<u>172-42</u>														
1500	<u>16-40</u>	<u>172-38</u>														
1600	<u>16-44</u>	<u>172-34</u>														
1700	<u>16-45</u>	<u>172-27</u>														
1800	<u>16-45</u>	<u>172-18</u>														
1900	<u>16-46</u>	<u>172-13</u>														
2000	<u>16-46</u>	<u>172-09</u>														
2100	<u>16-46</u>	<u>172-02</u>														
2200	<u>16-46</u>	<u>171-55</u>														
2300	<u>16-46</u>	<u>171-49</u>														
2400	<u>16-46</u>	<u>171-42</u>														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63



DATE Feb 13 Nov. 1964

TIME	LAT <i>N</i>	LONG <i>W</i>	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SFD.
0100	16-47	171-35														
0200	16-47	171-38														
0300	16-47	171-32														
0400	16-48	171-15														
0500	16-48	171-08														
0600	16-48	171-01														
0700	16-48	170-53														
0800	16-48	170-50														
0900	16-49	170-43														
1000	16-49	170-35														
1100	16-49	170-28														
1200	16-49	170-20														
1300	16-49	170-10														
1400	16-49	170-02														
1500	16-49	169-53														
1600	16-49	169-47														
1700	16-49	169-40														
1800	16-51	169-31														
1900	16-53	169-23														
2000	16-59	169-15														
2100	17-00	169-08														
2200	17-02	169-02														
2300	17-05	168-53														
2400	17-07	168-48														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE Sat. 14 Nov 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	17-10	168-40														
0200	17-14	168-52														
0300	17-18	168-23														
0400	17-22	168-15														
0500	17-25	168-07														
0600	17-27	167-59														
0700	17-29	167-52														
0800	17-34	167-47														
0900	17-38	167-33														
1000	17-41	167-25														
1100	17-44	167-18														
1200	17-48	167-11														
1300	17-50	167-02														
1400	17-53	166-53														
1500	17-56	166-50														
1600	17-59	166-43														
1700	18-02	166-30														
1800	18-05	166-21														
1900	18-07	166-16														
2000	18-11	166-07														
2100	18-14	165-58														
2200	18-17	165-51														
2300	18-20	165-43														
2400	18-23	165-30														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955  
12-5-63

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DATE Sun 15 Nov 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID %	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	18-27	165-26														
0200	18-30	165-18														
0300	18-34	165-09														
0400	18-37	165-01														
0500	18-41	164-52														
0600	18-44	164-44														
0700	18-47	164-35														
0800	18-52	164-25														
0900	18-53	164-17														
1000	18-58	164-07														
1100	19-02	163-56														
1200	19-04	163-54.49														
1300	19-07	163-43														
1400	19-07	163-38														
1500	19-08	163-32														
1600	19-10	163-27														
1700	19-12	163-17														
1800	19-15	163-08														
1900	19-16	162-50														
2000	19-18	162-52														
2100	19-22	162-48														
2200	19-24	162-34														
2300	19-27	162-25														
2400	19-30	162-17														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63

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DATE Mon 16 Nov 1964

TIME	LAT	LONG	PRES	WEA	VIS	SLP	DRY B	DEW PT	HUMID/O	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100	19-05	162-09														
0200	19-36	162-00														
0300	19-38	161-52														
0400	19-42	161-43														
0500	19-44	161-36														
0600	19-47	161-29														
0700	19-48	161-22														
0800	19-51	161-13														
0900	19-54	161-04														
1000	20-01	160-52														
1100	20-03	160-45														
1200	20-06	160-42														
1300	20-09	160-35														
1400	20-13	160-27														
1500	20-16	160-18														
1600	20-19	160-11														
1700	20-23	160-03														
1800	20-27	159-52														
1900	20-30	159-44														
2000	20-32	159-34														
2100	20-35	159-25														
2200	20-39	159-15														
2300	20-42	159-06														
2400	20-46	158-58														

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

SI-MNH-955

12-5-63



DATE TUES. 17 Nov 1964

TIME	LAT	LONG	PRES WEA	VIS	SLP	DRY B	DEW PT	HUMID/O	TL SKY	OPA SKY	WAVES	SEA TEMP	WIND S	WIND D	SHIP COURSE/SPD.
0100															
0200															
0300															
0400															
0500															
0600															
0700															
0800															
0900															
1000															
1100															
1200															
1300															
1400															
1500															
1600															
1700															
1800															
1900															
2000															
2100															
2200															
2300															
2400															

REMARKS:

ALL TIMES LOCAL (WHISKEY); WIND DIR. IN WHOLE DEGREES; WIND SPEED IN KNOTS; TEMPERATURES IN FAHRENHEIT; VISIBILITY IN NAUTICAL MILES;  
WAVES IN WHOLE DEGREES; WAVE PERIOD IN SECONDS; WAVE HEIGHT IN WHOLE FEET; SEA LEVEL PRESSURE IN MILLIBARS

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12-5-63